



WOOD RIVER REVIEW

WOOD RIVER MANUFACTURING COMPLEX



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31,000 components monitored

Program in place to reduce hydrocarbon emissions

In 1983 the Illinois Pollution Control Board finalized a regulation affecting several Illinois counties that were not meeting clean air standards for ozone. The regulation set a limit on the level of liquid and gaseous hydrocarbon emissions from refineries and other industries. Ozone is formed when hydrocarbons react in sunlight; exposure to it can cause eye irritation and other adverse health effects.

One of the counties affected by the regulation was Madison, the residence of Wood River Manufacturing Complex. To comply with the regulation, the Complex accelerated its development of an extensive, ongoing program to reduce "fugitive" leaks from components in hydrocarbon service. The "Fugitive Hydrocarbon Emissions Program" involves the monitoring of approximately 31,000 valves, pumps, compressors and process drains that service naphtha and light-



Paul Sibley, operator at Aromatics East, uses a detection instrument to test a CR-3 valve for vapor leakage. Approximately 31,000 Complex valves, pumps, compressors and process drains are regularly monitored for liquid and vapor emissions; those that leak are repaired.

Complex wins Pride Award

New signs and landscaping at the main entrance off Highway 111 earned the Complex a 1983 Pride Award of Achievement. **Don Baker**, manager - Community Relations, accepted the award on behalf of Shell at the Pride Inc. annual meeting Feb. 23.

Pride was formed in 1966 and is involved in beautification projects throughout southwestern Illinois. Awards of Achievement are presented each year to businesses, industries, communities, churches, civic organizations and individuals in recognition of outstanding beautification efforts.

The Complex was one of 10 award recipients for 1983.

ter hydrocarbons—gasoline, butane, propane and others.

Operators regularly inspect the components either visually for liquid leaks, or with the aid of detection instruments to determine if vapor leaks are present. Leaking components are repaired within 22 days unless a shutdown is required.

John Menzie, EP&S-Inspection, said that because ozone is mainly a summertime problem, the Environmental Protection Agency (EPA) designated March 1 to June 1 of each year as a monitoring period for all components. In addition, the agency requires valves and compressors in gaseous service to be checked again between June 2 and Aug. 1. Pump seals in light hydrocarbon service must be visually in-

spected every week between March 1 and Nov. 1.

Complex inspection efforts in 1983 found that only one percent of the regulated components leaked. Most of the leaks were in valves and pumps; the number of leaks in compressors and process drains was negligible. Records of all leaks and repairs were submitted to the Illinois EPA.

"Besides being an environmental requirement, the control of hydrocarbon leaks is a good business practice," said Menzie. "Repairing leaks minimizes exposure to employees and reduces product loss as well."

The Wood River emissions control program began with the formation of a charter committee in 1982, several (Continued on page 2)

Shell's profits up in 4th quarter, net income for 1983 is 2nd highest ever

Shell Oil Company reported fourth quarter 1983 earnings of \$549 million, \$111 million higher than the same 1982 period. Net income for the year was \$1,633 billion, an increase of \$28 million from 1982.

Per-share earnings were \$1.78 for the fourth quarter and \$5.28 for the full year, up from \$1.42 and \$5.19, respectively, for the 1982 periods.

"This is our second highest annual net income, despite the drop in oil prices and soft market conditions early in the year," **President John F. Bookout** said. "A major factor in the quarterly earnings gain was the continuing improvement in our chemical business.

In Exploration and Production, fourth quarter earnings of \$416 million were \$6 million lower than the same period in 1982. Full-year earnings were \$1.39 billion in 1983, down \$60 million from 1982.

In Oil Products, fourth quarter earn-

ings were \$81 million for the quarter, an increase of \$9 million. Major contributing factors were higher margins and increased sales volumes.

Full-year earnings in Oil Products were \$238 million in 1983, down from \$344 million in 1982, due mainly to the steep drop in prices for gasoline and other oil products early in the year. Total refined product sales rose for the first time in five years, with an increase of 4 percent over 1982.

The Chemical Products segment earned \$24 million in the fourth quarter, compared with a loss of \$26 million in the 1982 period. For the year, earnings were \$63 million in 1983, a sharp rebound from the \$25 million loss in 1982.

These results indicate the long-awaited recovery for chemical markets from recession is underway, as sales volumes increased and cost reduction programs are taking hold. Volume

gains occurred in almost every product line in 1983. The improvement was most notable in business lines closely tied to the automotive industry and housing.

"Capital expenditures are now projected at \$2.9 billion for 1984," Bookout said. "Our major spending emphasis continues to be on exploration and development of energy resources, primarily domestic oil and gas. Expenditures of \$2.2 billion are planned in the Exploration and Production segment in 1984, an increase of \$600 million over the \$1.6 billion actually spent in 1983. We also expect that capital outlays in Oil Products will increase by about \$100 million from 1983, while Chemical Product spending will be about the same."

SHELL SHORTS

Scholarship winner

Deborah Ann Jones, a freshman at Washington University, St. Louis, was recently awarded a four-year Shell Incentive Fund Scholarship. The scholarship award was presented by **Bob Martin**, Complex controller. Shell Incentive Fund Scholarships are designed to encourage outstanding minority students to pursue studies in business or technical fields.

Camera Club

The SRA Camera Club will meet Tuesday, April 3 at 7:30 p.m. in the Cafeteria. The program will be the second half of "Vacationing in Alaska" presented by **Mr. and Mrs. Frank Heintz**. The slide/photo contest theme is "open" this month. Entries must have been taken within the past two years.

Tetanus program

This reminder from the Complex Hospital: employees are eligible to participate free of charge in a tetanus immunization program. Anyone who has not been immunized in the past 10 years is encouraged to stop in for a primary series of injections. The Hospital is also equipped to provide booster shots and record keeping services. For more information, call the Hospital on extension 2308.

Program in place . . .

(Continued from page 1)

months before the EPA came out with its clean air regulation. Committee members were **J. I. Smith**, Aromatics East; **Jim Deeter**, Maintenance; **Fred Grush**, Industrial Relations; **Jay Rankin**, EOS-Environmental; and former Complex employee **Bob Merritt**, EP&S. The committee outlined the scope of the project before turning it over to an implementation team comprised of Menzie; Rankin; **Dale Moore**, Dispatching; **Lee Berlemann**, Aromatic West; and **Bob Ely**, Maintenance. The team attended a workshop at Houston in late 1982 to gain familiarity with a hydrocarbon emissions program under way at Deer Park Manufacturing Complex. The input from Deer Park and Wood River served as the basis for a plan of action.

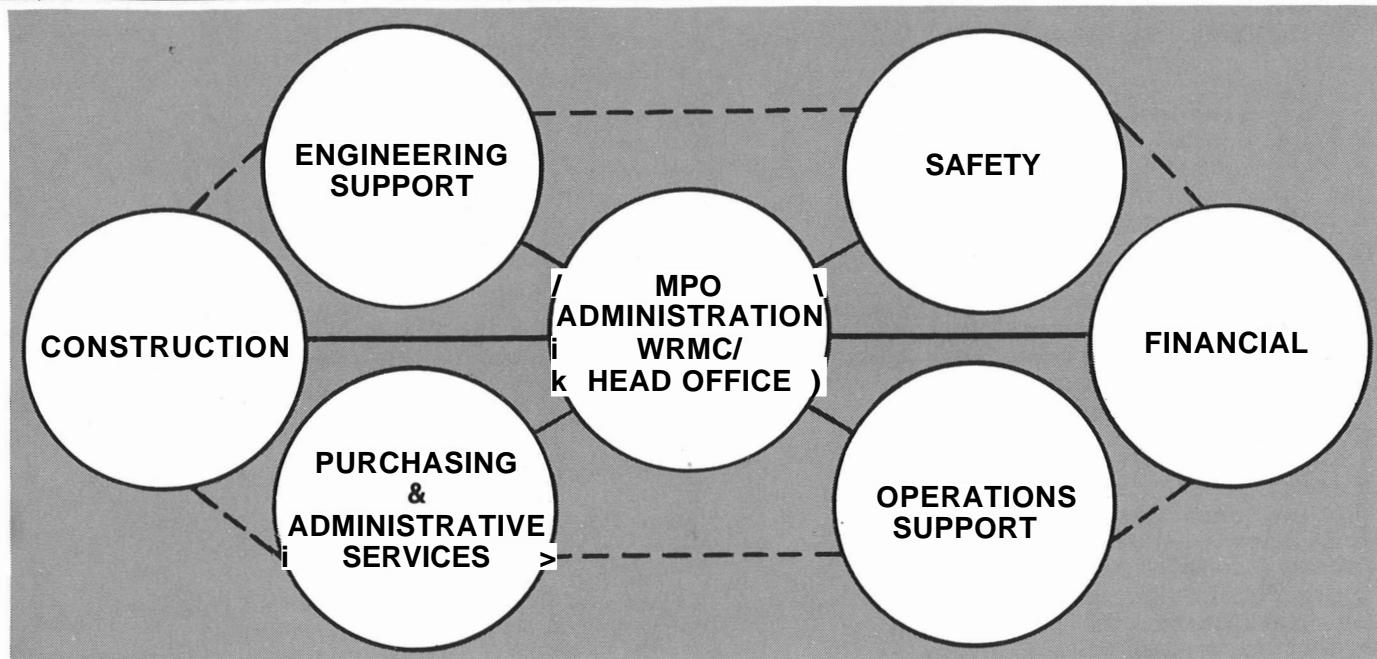
The next step was to design a pilot program to test component monitoring procedures. Hydrodesulfurization-2 (HDSU-2) and Catalytic Reformer-3 (CR-3) at Aromatics East were chosen as test units because of their location and complexity. Two training sessions were held for operators taking part in the pilot program. Test monitoring was a "learn as you go" situation, recalled **Joe Pazer**, Aromatics East. Testing

was completed in spring 1983 and final revisions were made to the program before it was adopted Complex-wide.

The program requires that each component be identified with a permanent number. Its number, description and location are entered into a computer for future reference. The data simplify record keeping, allow for tracking within the 22-day period, provide a call file function for monitoring, and sort those components that must be reported to the Illinois EPA.

Keeping accurate records of more than 31,000 components is a big job, as is scheduling maintenance for the pumps, valves, process drains and compressors, according to **Jim Peat**, EOS. He has responsibility for the repair and replacement of pump seals; about 60 were replaced in 1983. This year, operators will monitor close to 460.

"Wood River is experimenting with various types and brands of pump seals," Peat said. "We're interested in seals that will give us at least two years of reliable service. Anything we can do to get more use from pumps and other components while staying in compliance with the EPA is well worth the effort."



Major Projects: it's the people that make the difference

Major Projects is many things. It is detailed engineering design work, the purchasing of materials and equipment, construction activities, safety programs and the stacks of paperwork generated by these functions and others. For those interested in the bottom line, Major Projects is also very expensive. But more than anything, Major Projects is people.

For the time being, the Major Projects Organization (MPO) is making its home at the trailer complex outside the Main Office. By April, the trailers will be moved inside the gate so the employees can be closer to the energy conservation, modernization and yield improvement projects to which they are assigned.

The structure of MPO is patterned after similar organizations at the Deer Park, Texas and Martinez, Calif., manufacturing complexes for their major construction programs. Early on, it was decided to form a Major Projects Organization rather than assign the work to the run-and-maintain Wood River operation. This was necessary to minimize the impact on Wood River's existing organizations in carrying out their manufacturing goals. However, there is a close working relationship among MPO, Wood River and Head Office — the scope of Major Projects

requires an open and cross-functional flow of communication.

"Shell" has a lot of experience with big-scale projects," said **Russ Herring**, superintendent of Major Projects. "But the Wood River work is somewhat unique because it is all revamping and renovation of existing facilities."

Herring said that when setting up MPO, it was first determined what work was to be performed and what it would take in terms of manpower to do that work. MPO prefers to fill each staff position with someone from the Complex. If Wood River cannot spare a suitable person, then either an employee is brought in from another Shell location or a contract person is hired. A number of engineers have already transferred to MPO from other facilities. These engineers will return to their previous Shell assignments or move on to new ones at the completion of Major Projects in 1986. Several hourly employees are being assigned to MPO in coordination with field construction.

Typically, Shell has developed Major Projects safety programs as construction progresses. Because Wood River Major Projects involves work on existing units, it has become a top priority to organize a strong safety program from the outset. MPO has also hired

safety and industrial hygiene consultants to assist in the overview of the contractor safety program. Another change from the Shell norm is the early identification of mechanical support employees for unit startups.

Reporting to Herring are six general MPO functions: Construction, Engineering Support, Operations Support, Safety, Purchasing & Administrative Services, and Financial.

CONSTRUCTION

Major Projects promises to be the most activity at the Complex in the past 25 years, according to **Tony Calcaterra**, Construction manager. He said the average number of contractors' employees working at Wood River each day will be 300-400 and the peak level will reach close to 800. Most of these crafts people will come from neighboring communities and represent nearly 20 local firms that provide the following skills: general mechanical, electrical, insulation, refractory, painting, civil and specialty (x-ray, stress relief, etc.).

The contractors are charged with the responsibility of bringing their own employees safely, training and motivation programs to the job, said Calcaterra.

(Continued on page 4)



Major Projects

(Continued from page 3)

caterra. Each contractor has been issued copies of Wood River safety manuals as reference material. M. W. Kellogg, Houston, will assist Cat Cracker-1 contractors in an engineering, procurement and construction management capacity. Both Kellogg and Shell Engineering Design (SED) will support contractors in developing purchasing, planning, scheduling and other programs for additional projects.

How Wood River will handle the influx of cars and the parking and traffic problems they create is being studied by MPO.

Calcaterra said MPO Construction consists of project engineers and construction coordinators who, in conjunction with Maintenance, oversee three categories of projects: major construction/major maintenance (DU-1, DU-2, CCU-1), major construction/minor maintenance (SMR, VBF, SR), and minor construction/major maintenance (CCU-2, HCU).

The engineers are involved with engineering design and equipment procurement and work in the field with the coordinators in matters of operations, safety, maintenance and construction. One of their primary responsibilities is scheduling and balancing Major Projects construction with Complex maintenance. A concept unique to Wood River is the development of project teams which include project engineers and construction coordinators. Other team members are process engineers, operations coordinators and safety representatives.

The coordinators work with the contractors daily to ensure that the Shell permit system is followed, that operating employees are aware of construction projects in their areas, and they participate in an informational role with regard to quality assurance. The coordinators also have a planning function in determining manpower/resource needs for specific projects.

Calcaterra estimates that Construction will eventually expand from its current level of six employees to 15.

ENGINEERING SUPPORT

Employees in Engineering Support are engineering specialists and inspectors in the mechanical, electrical, instrumentation and pressure equipment disciplines. Their primary responsibility is quality assurance—making certain the field construction meets or exceeds the requirements of the project plans, specifications and applicable construction codes.



Denny Line, senior inspector, checks the condition and consistency of threading on low-temperature shift effluent air coolers at the Steam Methane Reformer. Line is assigned to the Engineering Support group of Major Projects.

Other duties include problem solving and troubleshooting during unit startups, coordinating equipment training for operators and crafts people, serving as Wood River's engineering representatives for Major Projects, and establishing new equipment files, records and spare parts stock.

Jim Steller, technical manager, explained that although Head Office Engineering has overall design and procurement responsibility, Wood River employees are encouraged to participate due to the nature of the work. Local knowledge of existing equipment as well as maintainability and operability input are recognized as key factors in smooth design-to-startup transitions.

Engineering Support will be the largest group in MPO and will exceed 40 people by December 1984, one-third of which will come from the Complex organization. The remainder will consist of Shell employees on temporary assignments from other locations and contract personnel.

OPERATIONS SUPPORT

The MPO group most concerned with the impact of construction projects on refining processes is Operations Support, headed **Steve Franke**. The process engineers and operations coordinators provide Head Office design engineers with Wood River operating data and unit specifica-

tions so that what is designed will work when constructed. Unit operability and flexibility are the main reasons for the group's input into the design phases.

"We also have the lead role in the review of tie-ins and equipment layout, and in deciding whether construction can be done during unit operation or if a shutdown is required," Franke said. "As changes are made, we update process training guides and conduct courses to prepare employees for unit startups and sustained operations. **Dennis Kimpton**, the process engineering team leader, is a focal point for process design input and startup planning."

Operations Support is the primary liaison between MPO and Wood River Operations. It has a core of seven employees excluding Operations personnel. The size of the group will grow to meet the needs of Major Projects during startups, as additional people are brought in on a temporary basis.

SAFETY

Coordinating safety programs is the job of **Jim Grizzle** and the Safety group. He and the safety inspectors assigned to MPO work with the Complex operating departments in the areas of contractor safety training and the permit system.

MPO's safety inspectors are doing what they did before coming to Major

Projects — advising and consulting, and issuing permits. Grizzle figures the inspectors will write an average of 150 permits a day for routine activity and as many as 80 a day just on the Cat Cracker-1 shutdown.

There are several types of permits: fire and safety permits for burning, welding, open fires and radiographic work; confined space permits for when workers enter manholes and vessels; and departmental work permits issued by Operations representatives.

Grizzle said MPO has hired consultants to support contractors informing safety and industrial hygiene programs of their own. The consultants bring to Wood River a background of working with contractors and the ability to effectively supplement Shell's safety efforts.

PURCHASING & ADMINISTRATIVE SERVICES

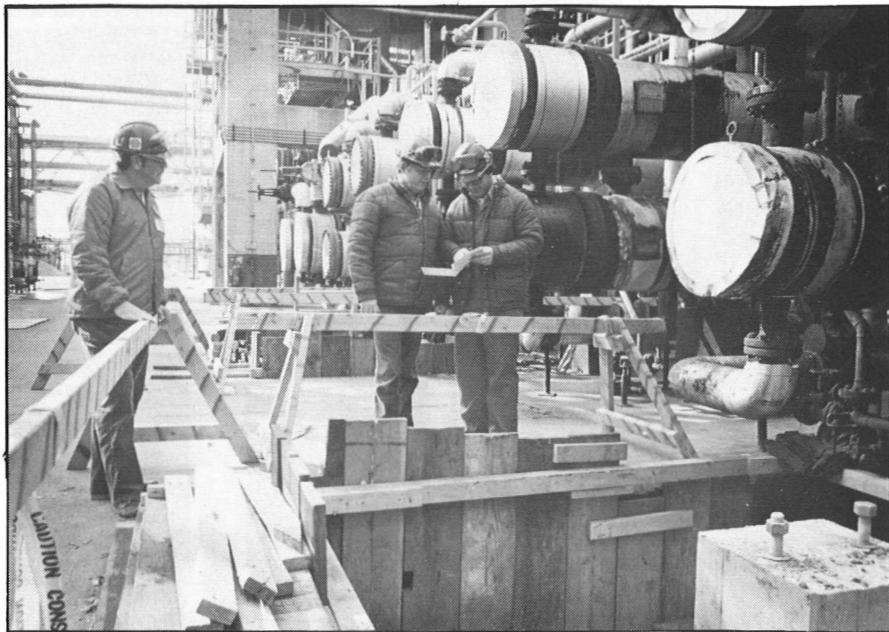
Contracts for Major Projects construction are handled by Purchasing and Administrative Services (P&AS). Currently, P&AS is issuing contracts for general mechanical contractors, and inspection, industrial hygiene and safety services. Consideration is given to general, sub- and third-tier contractors; many now work or have worked for Shell, said **Hector Sotelo**, staff purchasing representative. In all cases involving contractors, P&AS strives for contract standardization in order to maximize administrative effectiveness.

Once a contract is issued, the contractor becomes responsible for determining what materials and equipment are needed to do its field construction job. Field procurement is coordinated and overviewed by Major Projects' P&AS group. Contractors hired for Major Projects benefit from Wood River's experience with vendors, which usually results in prompt service and competitive prices.

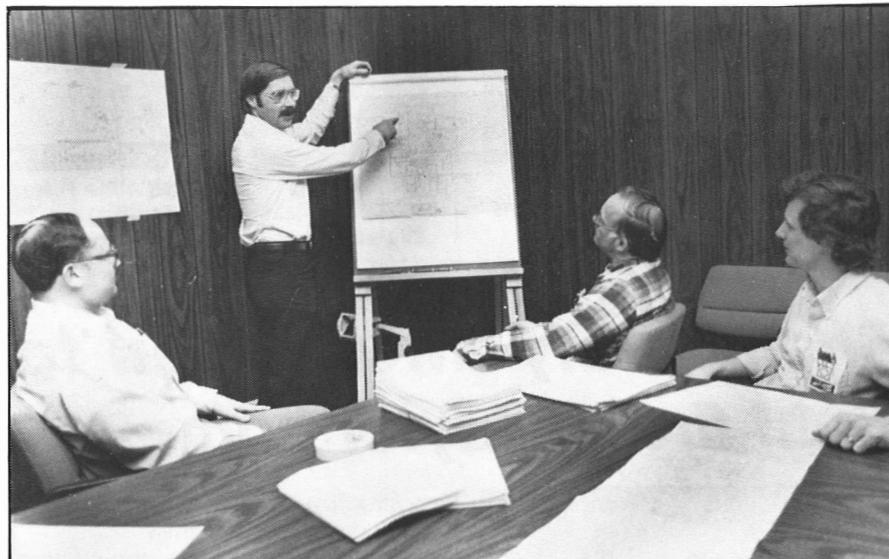
Maximizing contractor responsibility for the purchasing function will enable P&AS to operate with about five employees. While Major Projects is in its early stages, Sotelo will manage the contract administration and purchasing guidance functions with assistance from the Complex Purchasing department.

FINANCIAL

The construction and upcoming shutdown at Distilling-2 will be the first major test for MPO's Financial group. To date, the biggest task for supervisor



Verifying the quality of excavation for installation of structural steel at Distilling-2 are Major Projects' Bob Hamel, Safety; Bob McDonough, Operations Support; and Gary Bourland, Safety.



Dennis Kimpton, MPO Operations Support, reviews plans for Cat Cracker-1 revisions with (seated from left) Jim Nielson, EOS-LOP; Wayne Phegley, MPO Operations Support; and Bob O'Brien, EOS-LOP.

Kriste Branding has been one of organization. She said the staffing structure and job assignments are designed for total coverage of financial duties without creating duplication of efforts between the MPO and Complex Financial departments.

Branding anticipates the group will grow to about four people with the addition of invoice processing employees. Two auditors attached to Complex Financial will be assigned to audit Major Projects. Financial covers cost reporting and supports cost con-

trol: analyzing and reporting of expenditures; and auditing construction activities, offsite warehousing, cost controls, etc.

"We compare expenses against Major Projects AFE appropriations and develop cost and trend analyses for management," Branding said. "Basically, Financial makes sure that MPO and Wood River management are aware of what is happening cost-wise. And, we assure through our audit program that we pay only for what goods and services we receive."

Retirements



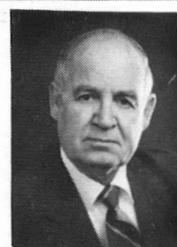
Charles Dale
Maintenance
39 years



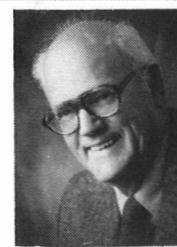
Bob Wright
Maintenance
37 years



Ez Speed
EP&S
36 years



Ivan Swofford
Aromatics East
35 years



Eural Beers
Distilling
35 years



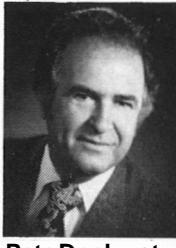
Cliff Barnes
Purchasing
33 years



Ramie Womack
Maintenance
33 years



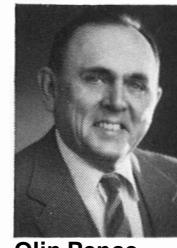
Kenneth Strain
Administration
32 years



Pete Dochwat
Compounding
32 years



Al Moody
Maintenance
32 years



Olin Pence
Maintenance
31 years



Bruno Guarienti
Maintenance
30 years



Vern Noll
Maintenance
30 years



Phyllis Carter
Emp. Relations
29 years



James Long
EC/Utilities
29 years



Madeline Peters
Financial
25 years

Anniversaries



Charles Modrovsky
Maintenance
35 years



Richard Barnes
Maintenance
30 years

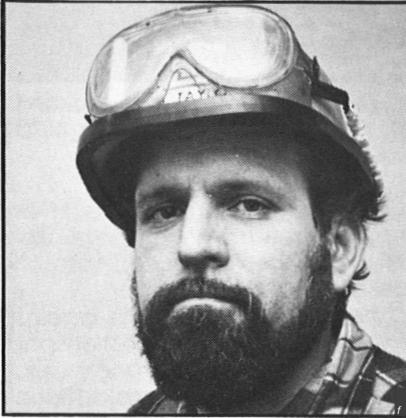


Elmo Davis
Maintenance
25 years



Harold Schaberg
Maintenance
25 years

Shell safety award used to fight fire at Taylor home



Jim Taylor

Quick thinking and a Shell safety award are credited with minimizing what could have been a tragic and

destructive experience for a Complex truck driver and his family.

Jim Taylor was at work the night of Jan. 20 when a radio message from Security's **Hal Kesinger** notified him that he was needed at home immediately. His house was on fire.

The initial call to Kesinger came from Taylor's wife, **Carol**, who was awakened by the ring of the telephone at about 10 p.m. Carol smelled smoke and traced it to a fire in the attic. She called the Main Gate and Kesinger located Taylor.

"By the time I got home the attic fire was only two inches from the roof," recalled Taylor. "I told Carol to get the extinguisher from the pantry floor and with it I put out the fire."

Not convinced that he had extinguished every trace of the fire, Taylor

called the South Roxana Fire Department. Firefighters spent two hours at the Taylor home, removing burned portions of walls and ceiling. Damage was estimated at nearly \$1,400.

Taylor said what fire fighting techniques he knows are a result of Shell training programs. The extinguisher is a safety award from when the Complex reached one million safe work hours two years.

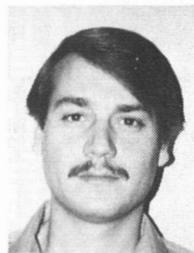
New to WRMCo



Jim Abner
Lubricants



Rik Elevens, Jr.
EC/Utilities



Dan Brantley
Laborer



Jimmy Bratton
Laborer



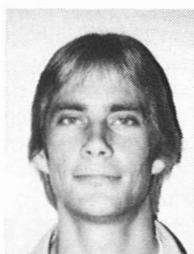
G. C. Evans



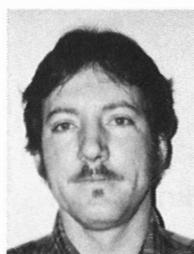
L. J. Disher



Jane Dempsey
Financial



Mark Hausman
Laborer



Rob McVey
Distilling



Carl Millitello
Dispatching



J. H. Bryant



Tim Roff
Major Projects



Ron Shellhorse
Purchasing



Cork Sparks
Laborer

George C. Evans, 70, died Feb. 6. Mr. Evans was a boilermaker helper, Engineering Field before retiring in 1974 after 32 years of service.

Luther J. Disher, 91, died Feb. 22. Mr. Disher was a concrete finisher before retiring in 1953 after 19 years of service.

Jesse H. Bryant, 71, died Feb. 26. Mr. Bryant was a foreman, Engineering Field before retiring in 1970 after 31 years of service.

Classified Ads

For sale: Sears car-top luggage carrier, used once. \$40. **David St. John**, 656-8583.

WOOT awe

A CASE AGAINST FALLOUT TOOLS



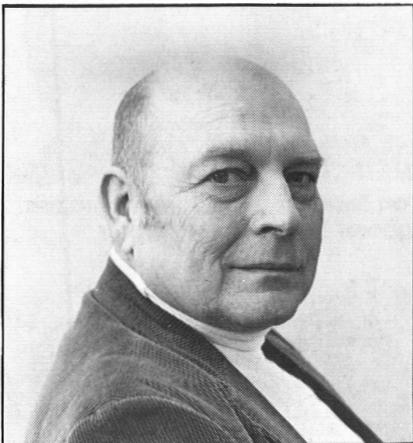
Employees challenged to improve safety performance

Even the best of athletes have occasional slumps. So it was with the Complex safety performance for the first two months of 1984. Six lost-time accidents is a tough way to begin a new year.

"There is usually something to be learned from each accident. Hopefully the experience will prevent mishaps of that kind from happening again," said **Harry Rollins**, manager of Safety & Industrial Hygiene. "We are all blessed with 20-20 hindsight when it comes to safety. The real challenge is to look at the present and future with the same awareness."

Rollins has been around the Complex long enough to know that, for one reason or another, employee safety performance has peaks and valleys. The weather is not always to blame, nor is a job itself always a cause of accidents as long as proper staging procedures are followed. When you get right down to it, he says, safety is an attitude, and an individual attitude at that.

"All of the motivation programs and safety awards in the world will not make the Complex an accident-free place to work if there isn't employee commitment to safety," said Rollins. "Nobody wants to get hurt, but some-



Harry Rollins

times we let out guard down just enough to turn a safe work situation into a potentially harmful one. The key is to make safe work practices a routine part of every job."

In 1982 the Complex rode a wave of enthusiasm brought about by an exceptionally safe work record. First came one million hours and the momentum was there to make two million hours. Unfortunately, the goal was cut short by only 11,000 hours. Nevertheless, employees had achieved the safest calendar year in Complex history.

Although falling short of the two million hours mark was a disappointment to everyone, there was still much for employees to be proud of, Rollins pointed out. Safety performance slipped a bit in 1983 and so far this year . . . well, it has not been good.

What is being done to turn the January-February performance around? Complex safety committees are studying the problem and working to develop effective motivation and awareness programs. Foremen and supervisors are being encouraged to "talk up" safety at every opportunity—during tool box meetings and individually when possible. The use of safety equipment and proper work practices are being reemphasized. New Complex signs are in place, and home mailings and other projects are under way to raise safety awareness at all levels.

"Safety begins with you and me, it is as simple as that," Rollinssaid. "We do not want to dwell on our 1984 record but by the same token we can let it serve as a reminder of what we want to eliminate—accidents of any kind. A good athlete has the ability to pull himself out of a slump and I believe the same is true of Wood River Manufacturing Complex."

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