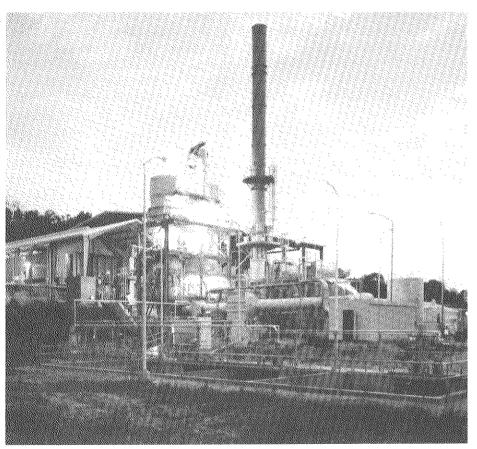
Energy Systems at Portsmouth

A Monthly Newspaper for Portsmouth Gaseous Diffusion Plant Employees of Martin Marietta Energy Systems, Inc.

Volume 6 Piketon, Ohio July-August 1991 Number 6



Continues at trial level TSCA incinerator now burning

The Department of Energy has authorized Martin Marietta's operation of the Toxic Substances Control Act (TSCA) Incinerator at the K-25 Site in Oak Ridge, following readiness reviews by DOE, Energy Systems and Martin Marietta Corporation.

The incinerator, an important element in the DOE-ORO waste management strategy, will be used to destroy uranium-contaminated polychlorinated biphenyls (PCBs) and other hazardous organic materials found in contaminated waste oils, solvents, water solutions, absorbents, biological matter, sludges and soils at ORO installations.

Materials handled by the incinerator are mixed waste (so designated because they contain both hazardous and radioactive constituents). Tests with actual mixed wastes have been conducted since June 1990 to evaluate instrumentation, monitoring and treatment systems.

The testing program has resulted in significant upgrades to processes and equipment to handle specific waste types more effectively and efficiently. Some one million pounds of liquid mixed waste was destroyed in tests.

Trial burn testing for an air emissions permit from the State of Tennessee has been

completed, and in advance of granting the final air emissions permit, the State authorized operation at levels demonstrated during the air test. Burning is continuing at this level.

Receipt of the State of Tennessee air pollution permit will complete the permitting requirements for operation of the incinerator under both state and federal regulations. These include permits for the Resource Conservation and Recovery Act, issued in 1987, and the Toxic Substances Control Act (to burn PCBs), issued in March 1989 after tests demonstrated a destruction efficiency of 99.9999 percent.

Construction of the \$26 million TSCA Incinerator was completed in June 1987. Test operations were suspended in 1989 because an induced-draft fan failed. A replacement fan, manufactured under an improved quality assurance program, was installed in a new enclosure designed to protect plant personnel.

All TSCA Incinerator systems and equipment were independently inspected by experts in incinerator technology. Major improvements were made in management of the facility, including upgrades to procedures for documentation and training and the incorporation of lessons learned at other DOE facilities.

Waste reduction is focus of July President's forum

Leaders of Energy Systems waste management programs discussed compliance challenges at the seventh President's Forum July 16 in Oak Ridge. Some 600 Energy Systems managers heard presentations by Central Waste Management Division Manager Charlie Frye, HAZWRAP Division Director Bob Craig, Senior Vice President Gordon Fee, ORNL Metals and Ceramics Division Director Jim Stiegler, Y-12 Manufacturing Manager Margaret Morrow, Compliance Training Manager Steve Giles and State Oversight Program Manager Terry Cothron of the Energy Systems Environmental Protection Division.

The forum went to Paducah on July 24, where the presenters met with some 300 members of plant management, union leaders and other personnel. They also visited the Portsmouth plant that day, where they participated in a plant tour and conducted discussions with senior management and other salaried personnel.

Calling the Oak Ridge forum to order, Hopkins said that no topic has as much impact on activities at the five Energy Systems sites as waste management and pollution prevention. Hopkins called for those present to "join me in expressing a commitment to meeting required standards, reducing noncompliances and living up to our values in being good neighbors.

"If we prevent pollution and noncompliances, we reduce work load, stress on people, costs, work associated with permits and audits, and potential for fines and penalties. Everything we hear says there will be more emphasis on enforcement."

Although both DOE and the Martin Marietta board are tolerant of our efforts to get into compliance on larger issues, he said, they are "losing patience" with repeated noncompliances such as missing labels on drums and storage period violations.

Pollution prevention is not new to Energy Systems, Hopkins said. During the last fiscal year, it is estimated that actions to prevent pollution resulted in some \$7 million in cost avoidance. As part of a Martin Marietta corporate initiative, the company is working to achieve a commitment to reduce six chemical waste substances by 60 percent by 1995.

(Continued on Page 2)

Hopkins reviews accomplishments of all five Energy Systems sites

Energy Systems President Clyde Hopkins presented an overview of company highlights as part of the July 16 President's Forum at Oak Ridge.

Although the award fee for the Energy Systems management contract is not usually an area for emphasis, Hopkins said, a recent upturn in ratings should be noted.

In the first half of 1988, he said, the point score for the Oak Ridge contract was just over 90, but in the ensuing period, Energy Systems saw a steady decline to a score of 83 for the last half of 1990. A turnaround in the first half of 1991 saw a rise to a score of 86. "So it appears we may have stopped the bleeding there, and we thank you for that," he said.

Uranium Enrichment activities hit a low score of 80 in the same time period, the lowest score since the award fee system was put in place, he said, adding that the score for the first half of 1991 was up to 83.

The Energy Systems Savings Bond cam-

paign is another high point, with an increase of \$20,000 per month in employees' investments in their future for a total of \$6 million for the year. Hopkins said Energy Systems will have a more visible campaign in 1992, when Martin Marietta CEO Norm Augustine will head the national drive.

Cooperative Research and Development Agreements are another positive note for the company, he said, in that they provide opportunities for private industry to improve their technologies by working hand in hand with Energy Systems people.

At present there are some 30 CRADAs in various stages of development with private industry, Hopkins said, and some 60 licenses with private companies have been granted for technologies developed at Energy Systems facilities. The program in technology transfer, he said, has been touted as the most successful in the country among government contractors.

(Continued on Page 3)

President's Forum focuses on waste reduction

(Continued from Page 1)

"We must all learn the rules and learn to live by them," he said. "We need to track our progress and report accurately. We must define our roles and responsibilities and have everyone look for problems and employ teamwork to solve them," Hopkins concluded.

Listing waste minimization, treatment, storage and disposal as key aspects of waste management, Frye told the group that minimizing waste "is the responsibility of each person or organization that generates waste. Waste that is not generated is waste that doesn't have to be treated, stored or disposed of."

Practices for managing waste have changed over the years, Frye said. At one time 55-gallon drums of hazardous waste were stored in outdoor sites, but today they are placed in covered storage facilities that must be permitted, equipped with appropriate signs, diking and facilities to ensure compliance with regulations and to provide appropriate protection to the environment and our workers. Such contrast of past practices with modern methods has raised the cost of doing business, Frye said.

Insufficient storage space, current rates of waste generation in excess of treatment and disposal capacity, a moratorium on offsite shipment of waste, and budgetary constraints related to building new waste management facilities are issues of concern at Energy Systems, he said.

Waste generators' key responsibilities include waste minimization and strict compliance with the waste acceptance plan to ensure that compliance with applicable federal and state laws, DOE orders and interfaces with waste management are accomplished, he said.

Craig, who presented an overview of HAZWRAP pollution prevention and waste management, said project teams work with various organizations to manage activities that other organizations execute. HAZWRAP supports programs for DOE and other federal agencies, he said. Examples are hazardous waste characterization studies on 160 installations, 60 process waste assessments completed for other federal agencies and the Waste Information Network that offers three databases to support waste management, environmental restoration, and planning and budgeting and that provides up-to-date awareness bulletin boards.

Fee, introducing the remainder of the speakers, who formed a panel of presenters, said that through teamwork, "we at Energy Systems can take on the world and win." Our goal, he said, is "to achieve excellence, not just compliance...but we have a long way to go."

In the past 12 months, he said, Energy Systems has reported 235 instances where corrective action was need to come into

compliance with environmental laws and regulations, 90 of which were related to the Resource Conservation and Recovery Act and 70 to the Toxic Substances Control Act.

"We can say today that we do worldclass work in research and development and in production," Fee said. "However, our goal must be to do our work in full compliance with the laws and constantly seek to improve waste operations."

Each employee must understand the waste streams and the nature of the materials he or she uses and must become knowledgeable of regulations that apply to his or her work. Training about regulations must be given to all employees and procedures must be developed and followed, Fee said. "Remember, we must strive to have zero violations."

Stiegler discussed the successful program for environmental safety and health compliance in the Metals and Ceramics Division, which can be considered "a microcosm of ORNL."

In seeking experts to assist in achieving compliance, Stiegler said there were few candidates, so "we decided to grow our own".

Tapping the resources among persons employed as technicians and secretaries in the division, Stiegler said he was able to find persons whose credibility was based in the fact that they "have been in the trenches" and understand the problems researchers face.

Initial and ongoing areas of attention included common access areas such as loading docks, attics, storage facilities, stairways and ladders. The cost of the program represents about .06 percent of the division budget, Stiegler said.

The key to success in changing how people work is acceptance, he said. The program must make sense to the people, must be dispensed in small pieces rather than all at once, must be presented in language they can understand and must be presented by people they respect.

Discussing National Pollutant Discharge Elimination System permits, Margaret Morrow said a primary means to meet permit requirements is to combine outfalls that deposit liquids from the plant into area waterways. With 222 outfalls at Y-12 and 161 at ORNL, "we have a tremendous opportunity to improve," she said.

Morrow cited accomplishments in meeting NPDES requirements, including dechlorination equipment installed on storm sewers at the Paducah Plant and K-25, recirculation of cooling waters to reduce the chlorine load on receiving streams, installation of ozone units on cooling towers to eliminate blowdown at Y-12, and consolidation of outfalls to surface streams.

The key to success in this arena, Morrow said, is to "think about where the materials being discarded could end up."

Giles told the group that compliance training emphasis in recent years has been directed at meeting specific requirements called out in laws and regulations.

But emphasis is shifting to identifying the skills and knowledge our employees need to bring us into compliance with laws and regulations that do not call out specific requirements, he said. Such effort will require teamwork between line managers and the training organization to design programs to meet those needs.

Activities under way to fill those needs include training for new supervisors and new employees and a "RCRA expert advisor" computer program that allows persons with limited training to use a lap-top computer to assess an area for environmental compliance, he said.

Computer programs also are used to provide innovative approaches to individualized training and to reduce classroom time.

Finally, Giles said, a training manage-

ment information system electronic database is available at each site to keep track of required training for employees.

Cothron, discussing an Agreement in Principle between DOE and Tennessee, said Energy Systems is responsible for helping its customer to comply with the agreement. DOE will support some 90 state employees who will conduct review of environmental, safety and health activities at Oak Ridge sites. Funding will exceed \$20 million over five years for DOE technical and financial support for state activities.

The first year's activities are expected to focus on ground and surface water, hazardous waste, air emissions and emergency preparedness, Cothron said, adding that the first impression reviewers have of Energy Systems facilities will be an important part of the final analysis because the first impression is considered indicative of the attitude employees have toward environmental safety and health.

Taylor transfers from LLNL to return to Energy Systems

Dave Taylor has joined the Portsmouth Gaseous Diffusion Plant as Director of Compliance and Support Services. He reports to Ralph Donnelly, Plant Manager.

In this new position, Taylor is responsible for providing more focus to move the plant toward performance excellence. Bob Bush, Director, Business Services; Gerry



Taylor

McGuire, Manager, Engineering; and Buck Sheward, Manager, Environment, Safety and Health, report to Taylor.

Taylor most recently was Laser Demonstration Facility Manager for the Atomic Vapor Laser Isotope Separation (AVLIS) Program, under joint development with Martin Marietta, at Lawrence Livermore National Laboratory (LLNL).

Prior to his assignment to LLNL in 1988, Taylor held a number of positions of increasing responsibility at the Paducah Gaseous Diffusion Plant beginning in 1977, including Quality Manager from 1984 to 1988.

He was graduated from the University of Missouri at Rolla in 1977 with a bachelor of science degree in mechanical engineering. He is a member of the American Management Association.

Dave and his wife, Phyllis, have three children and now live in Chillicothe.

Obituaries

Wanda Gleim, Portsmouth, June 11. Survivors include her husband Oron Gleim, who retired from our Purchasing Department.

Marlene Secrest, Portsmouth, June 24. Survivors include her husband, Sid (D-211).

Teresa Tipton, Rosemount, July 12. Survivors include her sister, Debby Perez (D-554).

Joseph M. Craft, South Shore, Kentucky, July 9. Craft was a Development Operator in D-533 at the time of his retire

ment March 1, 1979. Survivors include his wife, Nila.

B. Maxine Osborne, July 20. Survivors include her daughter, Teresa Shisler (D-105) and son-in-law, Dave Shisler (D-930).

Robert E. Shepherd, 67, Waverly, July 23. Shepherd was a Principal Engineer at the time of his retirement in February 1986. Survivors include his wife, Jacquelyn (D-534).

Helen L. Hantower, 79, McDermott, July 23. Hantower was a Librarian at the time of her retirement in February 1977.

Hopkins reviews accomplishments at all five Energy Systems sites

(Continued from Page 1)

A team of about 20 Energy Systems people, led by Dan Robbins, is working as part of a "blueprint team," addressing exactly how the new contract with DOE will be implemented.

The big news recently at ORNL, he said, has been analysis of hair and nail samples from the remains of President Zachary Taylor. Findings of studies of the irradiated samples solved a mystery of long standing and brought acclaim upon capabilities of the High Flux Isotope Reactor and personnel in the Analytical Chemistry Division.

Following a program review by the DOE Headquarters Energy Research people, Hopkins said, it appears that there is continued support for the Advanced Neutron Source project. "We still believe we are on track for building that facility in Oak Ridge," he said. "We also are still looking forward to building a new life sciences complex at the west end of ORNL."

Hopkins also cited a "tremendous ORNL effort" to analyze data on the efficiency of airline operations for the Federal Aeronautics Administration, which received high praise from the FAA for performance.

At Y-12, Hopkins noted improvements in scrap reduction and significant cost savings resulting from the reduction of cycle time. He added that significant progress also has been made in radiation protection upgrades.

At K-25 work is well under way to prepare for the November 12 arrival of a DOE tiger team. "I want to thank all the people who are working so intently to prepare for the assessment. There has been a lot of good work done, and we have been extremely impressed with the appearance of the site. But, there still is a lot of work to do, and we must get by the August corporate audit first," he said.

Also at K-25, Hopkins said, the TSCA incinerator is performing very well. "We have had some ups and downs, but the incinerator remains a very good addition to waste management options," he said.

Hopkins cited Portsmouth Plant salaried personnel for "performing valiantly during the strike. A number of groups have visited Portsmouth to look at health and safety and have given us a clean bill of health, so we commend the salaried people who are carrying on the work at the Portsmouth Plant so well."

Portsmouth also received a "satisfactory" rating on the recent security inspection and evaluation. "Portsmouth may have one of the best security organizations in the DOE complex," he said, adding that the first positive letter from Secretary of Energy James Watkins to Martin Marietta Chairman Norm Augustine concerning an

Energy Systems activity was to commend the successful I&E at Portsmouth.

At Paducah, a significant achievement was the reduction of the number of open action items arising from past audits. Through a concerted effort to organize activities and reduce overlap of effort, Hopkins said, open items were reduced in number from 449 to 89. Paducah has been recognized for having a self-assessment process that is considered among the best in the DOE complex, he said.

Work for Others programs for HAZ-WRAP, DSRD and the Space and Defense Technology Program bring in \$250 to \$300 million per year, 40 percent of which is subcontracted to local firms. "The impact on the local economy is significant," Hopkins said, adding that doing such work outside the company saves overhead costs.

Hopkins concluded by expressing appreciation for contributions of administrative and support organizations to ongoing company operations.

Retirees

James M. Arthur, Wellston, Supervisor, Maintenance (D-715), more than 35 years.

James A. Elchert, Piketon, Principal Technologist (D-623), 32 years.

Ivan E. Kouns, Ashland, Kentucky, Administrative Assistant I (D-820), 38 years.

Robert S. Martin, Portsmouth, Department Head, Production Engineering (D-535), 38 years.

Raymond L. McCoy, Portsmouth, Sheet Metal Mechanic 1/C (D-722), 37 years.

Harold E Morse, Wellston, Sheet Metal Mechanic 1/C (D-722), 15 years.

Calvin R. Seagraves, Portsmouth, Power Operator I/C (D-831), more than 36 years.

Norma M. Smith, Portsmouth, Materials (D-332), more than 13 years.

Ralph E. Sowers, Waverly, Process Operator (D-814), more than 37 years.

Charles E. Strausbaugh, Chillicothe, Carpenter (D-728), more than 36 years.

Richard B. Dodge, Sciotoville, Supervisor, Inspection (D-410), nearly 17 years.

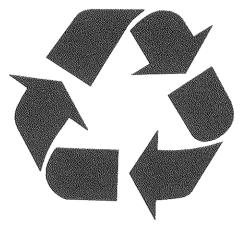
Carl H. Weghorst, Bainbridge, Superintendent, Emergency Management (D-920), more than 37 years.

James L. Cassel, Chillicothe, Maintenance Mechanic 1/C (D-726), 17 years.

Homer R. Nolen, South Shore, Ky., Electrician 1/C (D-711), 17 years.

Robert D. Whitt, Beaver, Maintenance Mechanic 1/C (D-726), 37 years.

James R. Leach, Winchester, Maintenance Mechanic 1/C (D-726), 23 years.



Recycling is here!

Recycling has arrived at the Portsmouth Gaseous Diffusion Plant.

The Waste Management Department has started the recycling process with the simplest and most widely known recyclable material — the aluminum can.

Funds collected from this recycled product are being donated to local charities through the plant's Values Council.

Several 30-gallon white plastic drums labeled "Pop Cans Only" have been strategically placed in a number of areas in which no uranium materials are handled.

Permanent hoppers for placement outside buildings are expected to arrive shortly.

Contact Gary Coriell at extension 6423 or 4051 to have additional containers placed or relocated in your areas.

Employees are asked to empty all liquids from the cans before placing them in the containers, and to place both aluminum and bi-metal cans in the new containers.

Janitor Services personnel are removing the cans from the temporary containers and placing the tied bags outside. Waste Management personnel then pick up the bags and take them to a staging area.

Pike Recycling is working with Martin Marietta in its recycling efforts. The first load of cans from the recycling effort were delivered to Pike Recycling on August 2. The weight distribution was 482.5 pounds (434.5 aluminum and 48 bi-metal).

Recycling of cardboard and paper are the next steps in the recycling process at the Portsmouth plant.

"We can expect to reduce by more than 50 percent the trash placed in the Sanitary Landfill once these efforts are in full swing," Coriell said.

Recycling of aluminim cans uses 90 percent less energy than making aluminum from scratch and cuts related air pollution by 95 percent. The energy saved from recycling of one can will operate a television set for three hours.

Each ton of recycled paper saves more than three cubic yards of landfill space. Every year, Americans throw away enough office and writing paper to build a wall 12 feet high stretching from Los Angeles to New York City.

Safety promotions to go by drawings to eligible people

A new safety awareness promotional program began August 1 to encourage employees to work at having in injury-free month both on and off the job.

Every employee who does not have a Recordable Injury/Illness or an Off-The-Job/Lost Time Injury during the month could win a \$100 Savings Bond.

Each month the computer will randomly select 60 eligible employees who will receive a bond. Eligible employees are those who are on the payroll the last working day of the month and have not experienced a Recordable Injury/Illness or an Off-The-Job/Lost Time Injury during that month.

Winners will be notified by telephone and lists will be published in bulletins.

The cost of the bond will be reported as taxable income on the employee's W-2 Form, and applicable taxes will be withheld from their payroll check.

The program will continue through December 31, 1991.

The program is based on the definitions and restrictions as set forth by OSHA Occupational Injury and Illness requirements and ANSI guidelines regarding off-the-job disabling injuries.

Ethics Hotline

To report possible wrongdoing or to obtain clarification on ethical matters, contract your Ethics Representative at extension 2554 or call the Corporate Ethics Office at (407) 356-9400.

In addition, the Martin Marietta Corporate Ethics Office has a 24-hour toll-free number: I-800-3-ETHICS (1-800-338-4427).

MARTIN MARIETTA

Energy Systems at Portsmouth

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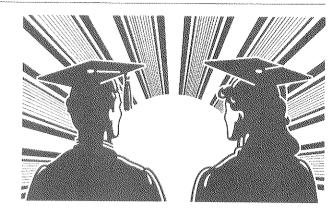
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Larry Kenneth Arthur (I L. K. Arthur D-621



Jodi DeAnna Austerman Middletown Madison
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Portsmouth G. M. Barr (retired)



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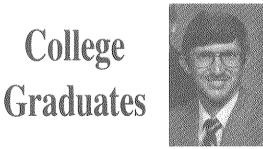
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Terrence Engene Marsh Ohio State University E. P. Marsh D-830



Melissa Lynn Olson West Virginia University B. G. Olson D-225



Amy S. Woodrum Ohio University C. D. Woodrum D-502

Dan Towne

Daniel A, Towne has been promoted to Department Head, Process Engineering (D-535). He reports to W. D. Netzer, Superintendent, Operations Engineering.

Towne came to work at the Portsmouth plant in October 1975 as an Engineer in Process Engineering. He became Staff Engineer in December 1978 and was promoted to Section Head, Process Engineering, in March 1983.

An Air Force veteran, Towne was graduated with a bachelor's degree from Case Institute of Technology in 1971 and with a master's degree from Ohio University in 1982, both in chemical engineering.

He and his wife, Donna, have three children and live in Chillicothe.

George Shoemaker

George D. Shoemaker has been promoted to Department Head, Engineering, Project Management (D-631). He reports to Bonnie J. Rumble, Superintendent, Project Administration.

Shoemaker came to work at the Portsmouth plant in April 1977 as an Engineer in Civil Engineering. He became Staff Engineer, Gas Centrifuge Enrichment Plant (GCEP) Engineering, in August 1980, and Sr. Engineer, GCEP Project Management, in October 1984.

Shoemaker was an Engineer, Specialist, and then Engineering Project Manager in the Enrichment Projects Coordination Office beginning in October 1989 and December 1990 respectively.

He was graduated from The Ohio State University in 1977 with a bachelor of science degree in civil engineering.

An Air Force veteran, Shoemaker is a member of the American Society of Civil Engineers.

He and his wife, Gwen, have two children and live in Circleville.

Ron Sharp

Ronald D. Sharp has been named Department Head, Property Department (D-379). He reports to Gary L. Wiseman, Superintendent, Financial Services.

Sharp came to work at the Portsmouth plant in October 1974 as an Accounting Clerk. He became Cost Accountant in May 1978 and Accountant in June 1981, and was transferred to the Property Department in April 1983.

Sharp became Staff Accountant in September 1984 and Technical Computing Specialist in March 1990.

An Army veteran and Jackson resident, Sharp has studied through the International Accountants Society, at the University of Rio Grande and at Shawnee State.



Towne



Shoemaker



Sharp



Grooms



Coffman



Casto

Promotions

Stephen M. Casto has been named Department Head, Quality Assurance (D-411). He reports to John Cormier, Manager, Quality Programs.

Casto is responsible for the development and implementation of an integrated system of audits and surveillances that will support an enhanced Plant Self Assessment process.

Casto joined Martin Marietta at Portsmouth in March 1991 following 25 years in the U. S. Navy. His naval experience and background was in operation, maintenance, training and quality assurance associated with the Navy's nuclear power program.

Steve Casto

Casto received several honors and awards during his 25-year Navy career.

His last Navy assignment was as Quality Assurance Officer at its newest and largest east coast Trident Submarine Refit Facility. There, he was responsible for the development and implementation of the Quality Assurance Program for the facility.

Casto was graduated from the Devry Technical Institute at Kansas City in 1963 with an associate degree in electronics engineering technology.

He is a member of the American Society for Quality Control. He and his wife, Carol, live in Chillicothe.

Sharon Grooms

Sharon J. Grooms has been promoted to Department Head, Technical Training (D-224). She is responsible for ES&H Compliance and Technical Training and reports to Reed Walters, Training Manager.

Grooms came to work at the Portsmouth plant in June 1978 as an Environmental Surveyor, Industrial Hygiene & Health Physics Department. She was named Foreman, Process Area, in the Gas Centrifuge Enrichment Plant (GCEP) Production Training Department in January 1983.

Grooms was a Technical Assistant in the Materials Sampling and Testing Laboratory from March through August 1987 before becoming a Technical Trainer.

A Piketon resident, Grooms was graduated from The Ohio State University in 1974 with a bachelor of science degree in earth science education. She is pursuing a master's in safety at Marshall.

Scott Coffman

Scott A. Coffman has been promoted to Department Head, Accounts Payable (D-375). He reports to Gary L. Wiseman, Superintendent, Financial Services.

Coffman came to Portsmouth in October 1974 as a Cost Accountant in Accounts Payable. He became Accountant in February 1977, Staff Accountant in June 1979, and Sr. Accountant in March 1990.

Coffman was graduated from Ohio University in 1974 in business administration, specializing in accounting.

He and his wife, Pam, have two children and live in Wellston.

EAP number corrected

The 800 telephone number listed in the Employee Assistance Program brochure mailed to your home is incorrect. The correct number is (800) 222-3778. Please correct your brochure. If you have any questions, call John Ater at (614) 897-2331, extension 5229.

SERVICE MILESTONES

August 1991

35 years — Richard T. Shelton, Raymond Montgomery and Gerald E. Bobo.

20 years - Melonie A. Valentine and Ronald L. Miller.

15 years — David J. Willman, Larry E. Tackett, Orville F. Tackett, Teddy D. Gatliff, William G. Copley, Rickey P. Rothwell, Adel R. Wolfe, James R. Miller, Philip S. Wiltshire, Paul E. Cross, Michael E. Castle, Lawrence W. Drummond Jr., Thomas A. Martin, Danny B. Denney, Robert L. Moore Jr., Sandra J. Crace, James D. Hoover, Debra S. Brown, Michael L. Parker, Emma S. Adams, Majorie L. Keel, Jeffrey D. Rhoads and Thomas R. Hester.

10 years — Kathy J. Burton, Robert J. Wheeler, Keith M. Blevins, Lisa A. Mossbarger, David E. James, Kathleen A. Nelson, Gregory K. Rucker and Marsha E. Bevins.

September 1991

35 years — James H. Creech and Jack Lang.

15 years — Roger L. Simmons, Roy L. Stevens, Jeffery B. Walburn, Robert R. Konanz, Brian N. Barnes and Janet E. Sword.

10 years — Mark A. Saltzman, Dorothy K. Davis, Dorothy M. Valentine and Terry L. Duncan.

Conduct of Operations guidelines being executed

Energy Systems facilities at Oak Ridge, Paducah and Portsmouth are becoming more consistent in operating and maintenance practices as a result of implementing guidelines for Conduct of Operations aimed at making the sites safer and more efficient than ever before.

Those guidelines promote job ownership, formal standards and practices, training and rigorous self-assessment. The result is improved productivity, reliability and safety, said Tony Wright, Energy Systems Conduct of Operations manager. "We want people to know why change is taking place and to understand that it is necessary change for the better," Wright said.

Training for executives, begun in December 1990, was extended to division managers in January. Training for non-management personnel began in April.

At K-25 and ORNL, implementation is tailored to division needs. The divisions conduct self-assessments against performance standards that address areas including operations procedures, log keeping, control of equipment and system status, investigation of abnormal events, shift turnover, equipment labeling and required reading. The approach requires that managers take control of operations to determine what procedures are in place and what the needs are, said Bob Clark, ORNL Conduct of Operations manager. Action plans that outline ways to integrate Conduct of

Energy Systems facilities at Oak Ridge, Operations principles into operating proaducah and Portsmouth are becoming cedures also are being developed.

At K-25, division managers receive training and attend workshops, and mentors are assigned to some divisions. Using a graded approach, managers set priorities to determine which facilities should implement the program first, said Patti Adcock, who manages implementation for K-25. Adcock said accelerated training will be offered for personnel in those facilities, "but at the same time, we are implementing the program plant-wide by division," she said.

"Technical experts are available to assist in establishing performance criteria and writing procedures, and sector leaders have been assigned to assist in implementation and to suggest activities," she said.

At ORNL, training for division managers includes review of hypothetical situations and learning to identify areas that conflict with Conduct of Operations guidelines. Implementation advisors are appointed in each division, and each division has submitted the conformance documentation that DOE requires in the compliance phase, Clark explained.

"The next step is to develop a manual for environmental, safety and health issues, with emphasis on good management practices," he said.

At the Paducah Plant, personnel in each division receive both classroom and on-the-job training, and new concepts are either

tested in pilot programs or integrated division- or plant-wide.

Operations department heads and consultants suggest procedures that need to be developed. Issues or concerns that are unique within a division are addressed individually, said Brenda Lichtenberg, a quality specialist. Lichtenberg said that an action plan has been developed for both the Operations Division and plant-wide initiatives. On-the-job training in such areas as communications and shift turnover is conducted along with implementation training.

At Portsmouth, training in Conduct of Operations began in November when more than 400 Operations Division personnel attended overview sessions in which DOE requirements in such areas as control of tools and equipment, management involvement, control and calibration of test equipment, and maintenance history were detailed. After procedures and training plans are in place, personnel at Portsmouth will be trained in "Conduct of" principles as appropriate.

The Y-12 program, which embraces more than the areas specified in DOE Order 5480.19, was initiated with a Conduct of Facility Operations implementation school for leaders representing 16 operational and support areas. Guidelines for Conduct of Facility Operations embrace maintenance, root cause analysis, radiation protection and other areas of concern identified following the 1989 technical safety appraisal, said Martha Martin, Manufacturing Engincering manager.

To get the Y-12 program under way, students in Conduct of Facility Operations implementation classes worked full-time to become subject matter experts for their facilities. For four months, they attended classes two days a week and spent the remaining three workdays on homework and

implementation in their areas.

"We found through experience at our model facility that we needed a structured approach," said Patty Perkins, Y-12 conduct of facility operations manager. "We combined classroom study with hands-on experience."

Perkins said that rather than implement from the top down, Y-12 began by training a cross-section of employees. As instruction progressed, division managers took four-hour training programs in which implementers led the discussion.

Drafts of 13 new procedures for Y-12 facilities were written during the four-month training, and as a final task, participants developed implementation plans for their areas and outlined long-term facility goals.

Martin said the implementers also attended training in Conduct of Maintenance. "It is one way to bridge the gap between operations and maintenance personnel," she said.

The school was designed to help achieve a 68 percent implementation of DOE Order 5480.19 in the areas represented, Perkins said. "The fact that some areas have exceeded that goal indicates that the program was successful."

Commenting on what they would like to see happen and what they learned from their experiences, graduates of the Y-12 implementation school said they have gained better understanding of requirements for their jobs. "Having job requirements written on paper allows for better control of performance. It means we can do it right the first time," said Ron Shrader of the Y-12 Lithium Operations Division.

"Conduct of Operations is not only about compliance, it's about continuous improvement and excellence," said Glenn Bridges of Assembly.

MARSTIN MAINISTA

MARTIN MARIETTA ENERGY SYSTEMS, INC

POST OFFICE BOX 2009 OAK RIDGE, TENNESSEE 37831

August 1, 1991

Dear Fellow Employee:

Two of Martin Marietta Energy Systems' Values are to encourage clear two-way communication at all levels and to be responsible stewards of all of the resources entrusted to us. I believe that it is important for each of us to bear in mind a principle that is very closely related to these two values: that every Energy Systems employee is free to express his or her views and to raise issues without fear of retribution.

The Martin Marietta Corporation Code of Ethics states that "it is imperative that an employee have the opportunity to raise concerns or to report misconduct without fear of retribution. It is the Corporation's determination to establish an environment in which employee reports are expected and accepted and in which an employee may feel free to voice a concern or report a violation without fear of intimidation."

Issues that might be raised in this way could include safety, health or environmental concerns; waste; fraud; abuse; mismanagement; or violations of laws or regulations, although there certainly may be others as well. Energy Systems' hot line number for reporting fraud, waste and abuse or concerns about quality, environment, safety or health is 576-9000 (FTS 626-9000). Our Ethics hot line number is 576-5800 (FTS 626-5800). The DOE Inspector General and environmental hot line number is 1-800-541-1625 (FTS 896-4073). If you would prefer, you are welcome to arrange an "open door" session with your supervisor or, if necessary, any of Energy Systems' senior managers to discuss concerns you may have about the operation of our company.

Reporting such concerns is really more than a right; it's a responsibility. I would encourage each of you to exercise this responsibility if the need arises.

Sincerely, Clyde Stopekins Clyde C. Hopkins

Logs useful in finding errors

Documentation of procedures is a valuable tool for finding errors and weaknesses in operation, said Paul Ziemer, DOE assistant secretary for Environment, Safety and Health, speaking to Energy Systems employees at a recent workshop on environment, safety and health.

Ziemer discussed requirements of DOE Order 5480.19 on the Conduct of Operations, citing log keeping as a fundamental of sound Conduct of Operations. "If you write it down, you find the holes," he said. The order addressing Conduct of Operations, issued in 1990, was modeled after Institute for Nuclear Power Operations guidelines established following the Three Mile Island reactor incident. INPO guidelines emphasize the extent to which human factors can affect the safety of operations at nuclear power stations.

"We want to find the best and safest way to do a job or a task," Ziemer said. Formal procedures in operations help workers to know in advance how jobs should be done. Ziemer said guidelines for Conduct of Operations are not intended to stifle freedom of inquiry and are not simply paperwork review.

"It is easy for folks to look at tiger team assessments view the findings as trivial matters," he said. For example whether a hand railing is 42 inches from the ground or steps are a certain height might seem trivial, but "people must look at the reasons for the procedures" and see the DOE order as a way to improve efficiency, he said.

Bob Clark, who manages Conduct of Operations implementation at ORNL, said the program involves "doing what makes sense." Referring to the success of the Metals and Ceramics Division pilot program, Clark said that by defining who is to do what job and by enumerating responsibilities, the division discovered gaps in the organizational structure. The division has saved 1,200 employee-hours of training by defining needs and is now operating the Building 3025 hot cell at 20 percent less cost, and "that's real money," he said.

Urges math and science study Young speaks to teachers academy

Citing foreign competition, the growing importance of technology and the declining number of American students who pursue careers in science and mathematics, Martin Marietta Corporation President A. Thomas Young challenged participants in the Academy for Teachers of Science and Mathematics at the University of Tennessee to motivate students to study mathematics and science.

Speaking at the July 19 banquet marking the end of the four-week academy session, Young told 73 teachers from four Southeastern states, "Whether young Americans choose to study math and science depends to a great extent on their teachers. Every one of you has the ability to motivate literally hundreds of students.

The academy represents a partnership enterprise of Martin Marietta Corporation, Tennessee and DOE to promote math and science excellence in the classroom.

Charles Smith, commissioner of the Tennessee Department of Education, said the program is "exactly the kind of partnership that is going to be essential if we are going to develop 21st-century schools for this

Martin Marietta Corporation contributed \$1 million last year to help establish the Martin Marietta Fellows Program, through which teachers of kindergarten through 12th grade receive fellowships to the academy, where they sharpen their teaching skills in mathematics and science.

Participants are chosen by their local school systems as representing the greatest potential for the future among teachers in those systems

Young said the academy gives the teachers "a hands-on opportunity to meet with distinguished scientists and to hear directly about the latest developments in science and technology.

Ken Monty, academy director, said the program offers the intellectual challenge of new experiences in science and mathematics. Perhaps even more important, he said, the academy and the stipends provided by the Martin Marietta contribution are a "signal that society looks upon these teachers as very important.'

UT Chancellor John Quinn, said the summer program is a response to President Bush's goal of making the United States number one in mathematics and science by the end of the decade.

Quinn said the program has received good support, and is an important step toward making the U.S. tops in science and mathematics by getting teachers excited about teaching mathematics and science.

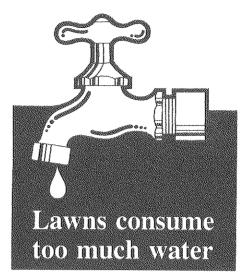
Young told the academy participants that modern technology "is more significant than ever" and that mathematics and science as components of technology are essential to quality education. In that formula, mathematics and science teachers are "very special," Young said. "That is why you are here and that is why we are proud to be associated with you.'

Young said that inadequate preparation in science and mathematics is a problem not just in the classroom. "Those of us in business also have experience with the problem when we seek qualified employees,"

"One major corporation recently tested 23,000 applicants for entry level positions and got an 84 percent failure rate. Productivity losses caused by poorly trained workers and remedial training costs are a burden to industry of \$25 billion a year.'

Young said the nation will face a shortage of up to 700,000 scientists and engineers at the beginning of the 21st century, "yet we live in a world where competitiveness depends heavily upon scientific and technological competence.

"Today, business, government and academia must work together to reclaim our educational leadership," he concluded.



Editor's Note: The following is excerpted by permission of The Earthworks Group, "50 Simple Things You Can Do to Save the Earth," 1989.

Americans pour an estimated \$6 billion on their lawns every year.

Lawn care isn't something you normally associate with saving the Earth. That is, until you realize that we overwater the estimated 20 million acres of American lawns and some 600 trillion grass plants by 20 to 40 percent

Due to outdoor watering, water use in America increases by as much as 30 percent in the summer months. Most established lawns need about one inch of water a week.

But how much is too much? To determine the sprinkling time to obtain this inch of water, place three cans around the area you're sprinkling, at varying distances. Check the cans every five minutes to see how long it takes for an inch of water to accumulate in each. Add the total time for each can and divide by 3 to get an average. This figure represents the length of watering time for your lawn. Runoff is prevented when water is applied slowly.

Avoiding overwatering can save about 12 percent of a homeowner's water use during the summer for an average of over 50 gallons a week. Based on normal water consumption of 30,000 gallons per month, this measure would save over 10,000 gallons during the summer. Additional savings are

realized when sewage costs associated with that water consumption are eliminated.

An estimated monthly savings range for both utility services in Portsmouth, Chillicothe, Jackson and Waverly is \$10-\$16.

Following are some lawn care tips to avoid overwatering your lawn:

- Set your mower blades high. For most types of grass, the proper length is 2" to 3" high. This encourages longer, healthier roots, and provides natural shade for the ground around each plant, which enables it to retain moisture in the soil.
- · Cut it high and let it lie. During dry periods, leave grass cuttings on the lawn. Cuttings serve as a moisture-retentive mulch and a natural fertilizer.
- Early morning watering is best. Water from sprinklers evaporates 4-8 times faster during the heat of the day than in the early morning. Watering at night is better than midday, but it can cause fungus in grass plants.
- Watering brown grass is wasteful. This grass is dormant and will revive after normal rainfall begins.

When water supplies are scarce, most public utilities will limit the amount of water consumption. But, saving water isn't something to do only during a drought. Every drop of water wasted is a drop less of a wild and scenic river, a drop less of a salmon run, a drop less in a dam filling a glorious valley.

Water conservation also reduces the amount of chemicals and energy used in water and sewage treatment. It reduces the amount of energy needed to pump the water to your home.

Conservation can be accomplished by simple, cost-effective measures that require little change in lifestyle. For people concerned with saving the Earth and monthly budgets, the advice is to "leave it a lawn."

Piketon, Ohio BULK RATE U.S. Postage P A I D

New Employees

July 8

Roy A. DePue, Construction Engineering (D-632).

Richard W. Dively, Health Physics (D-102)

Mary E. Delay, Waste Management (D-451).

Sean C. Higbee, Employment (D-024). Rachele S. Lawson, Employment (D-024).

Eric P. Meredith, Employment (D-024).

July 15

Stephanie L. Battle, Employment (D-024).

Samuel J. Schoettle, Environment and Industrial Hygiene Analytical Services (D-551).

Anthony Phillip Zeis, Cascade Operations (D-810)

Timothy W. Olin, Environmental Control (D-103).

Mark A. Williams, Employment (D-024).

July 22

Christopher G. Arnett, Nuclear Materials Accounting (D-932).

Darren C. LeBrun, Employment

July 29

Madeline S. Trego, Purchasing (D-321).

Tina M. Payne, Materials Sampling and Testing (D-511).

Ronald A. Sobocinski, Chemical Engineering (D-623).

August 5

Creshanna M. Workman, ES&H Staff Support (D-108).

Christopher R. Martin, Health Physics

James F. Lico, Instrumentation and Computer Technology (D-521).

Dianne E. Knittel, Employment (D-024).

August 12

Jodi S. Kayser, Medical Department (D-111).

Karl E. Roach, Mass Spectrometry (D-513)

Timothy A. Hayes, Maintenance Services and Management Systems (D-742).

Robert J. Lagnese, Operations Training (D-226)

Martin Marietta Energy Systems, Inc. P.O. Box 628 Piketon, Ohio 45661

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