



Lab Receives Energy Management Honors

Fermilab was chosen as the 1989 recipient of the DOE In-House Energy Management (IHEM) Program award for the **Best Energy Management Program at a Laboratory**. This award was conferred in recognition of Fermilab's "extraordinary achievements, initiatives and resourcefulness in planning and implementing a highly effective energy management program."

The award was presented by J. Michael Davis, Assistant Secretary for Conservation and Renewable Energy and accepted by **Dennis Theriot**, Directorate, on October 26 at the Eleventh Annual In-House Energy Management Awards Ceremony held at Forrestal Auditorium in Washington, D.C.

Actions taken at Fermilab during FY 1989 to improve energy efficiency included: lighting retrofits and controls, gradual conversion to energy efficient

fluorescent lamps and ballasts, accelerator operating control revisions to reduce electromagnet power levels during periods when no proton beam is being accelerated, conversion from electric to natural gas heating, installation of winter time "free" water cooling heat exchangers, and an upgraded energy awareness and employee cash award incentive program.

During FY 1989, the Lab reduced energy consumption per square foot from the FY 1985 base-year by 5% in buildings and by 36% in metered processes. Energy consumption in vehicles and equipment was reduced by 22%.

According to Davis, "Fermilab's achievements, which includes consumption decreases in excess of 10%, contributed significantly to the Department of Energy's energy reduction goal of 10% by FY 1995."

Fermilab and Riches receive AEE Awards

Due in large part to the work and dedication of Bill Riches to energy conservation at the Laboratory, Fermilab was chosen as the recipient of the 1990 Association of Energy Engineers (AEE) Energy Efficiency Corporate Award, which was awarded on October 25 at DOE/Argonne National Laboratory. At the same ceremony, Bill was honored as the recipient of the 1990 AEE Award as Regional Engineer of the Year. Bill is pictured (R) accepting his award.



In memoriam

William Riches
1927 — 1990

William Riches (BS/FO/Engr.) passed away Sunday, October 28 at his home.

Bill began his Fermilab career in 1968 as a plant manager and became the driving force behind the Laboratory's In-House Energy Management Program, which was recently recognized by the U.S. Department of Energy in an awards ceremony held in Washington, D.C.

As a part of the Lab's very successful Energy Management Program, Bill initiated and implemented an Employee Energy Conservation Awards Program. This program, which affords Lab employees an opportunity to receive cash awards up to \$5,000 for energy-conservation suggestions, has served as a model for other DOE-funded facilities.

Bill served as Vice President of the Chicago Chapter of the Association of Energy Engineers and was a member of the Professional Engineers, the National Fire Protection Association and the Fox Valley Shrine Club.

He is survived by two sons, Michael A. Riches of Sparks, California and Kenneth W. (Susan) Riches of Grover City, California; one grandson, Adam M. Riches and one sister, Mrs. Charles (Beatrice) Brooks of Fontana, California.

Contributions in Bill's memory may be made to the Shriner's Hospital for Crippled Children, 2211 N. Oak Park Ave., Chicago, IL 60635.

Children's Center celebrates tenth anniversary:

This year marks the tenth anniversary of the Fermilab Children's Center which has for over a decade provided a caring, nurturing day-care environment for the children of employees and visitors. "The existence of the Center has allowed me to pursue my career with the knowledge that my children were being well cared for in my absence," said **Pat Oleck**, Directorate. Over the years, the Center has cared for over 700 children representative of about 500 families.

The Children's Center opened its doors on January 2, 1980 after a two-year needs assessment and planning period. On opening day, the Center's two part-time teachers greeted only two children. Within a week, six children were enrolled and the clientele has risen steadily since. Originally housed at 22 Sauk Boulevard, the Center has had three homes to accommodate expansion needs and is now located in the Curia Complex at 28 Shabbona.

"It feels like family is taking care of my children," said **Treva Gourlay**, Physics Department. She and her husband Steve are both employees of the Laboratory. "Because my children are being cared for by other Lab employees, I feel they have a better understanding of the demands of this work environment. If a child is upset, the teachers are in tune with the fact that perhaps one of the parents is travelling or working long hours. This work environment is unique and the day-care providers at the Children's Center understand that, and are supportive of the parents and the children. I don't know if I could find this kind of care somewhere else. I have always been really impressed with the Center."

Headed by Administrator **Patti Hedrick** and Assistant Administrator **Sue Hardy**, the Children's Center currently provides daily care for 80



Patti Hedrick, Children's Center Administrator, works on math concepts with preschool and kindergarten class

children and employs 15 teachers. Day care is available for employees' and visitors' children ages six weeks to six years and includes infant care and a nonaccredited half-day kindergarten.

The philosophy of the Center is to promote the development of each child socially, academically, physically and emotionally taking into account each child's level of interest and ability. "Making this statement a reality instead of just a philosophy has been made possible by the support of the Fermilab community," said Patti. "The teaching staff, parents and various sections and groups at the Lab have all worked together to make the Center a success." "This working together has enabled us to provide the children an atmosphere that is very much a home away from home," added Sue.

The emphasis on providing for the individual needs of each child is evident when one visits the Center. In the infant wing, day-care providers rock, hold, talk to and play with the babies, toddlers can be observed in playgroups and inquisitive three, four and five-year-olds work and play with their peers as they hone their preschool skills. It is a highly interactive environment, as teachers guide and foster each child's social and academic growth.

Patti cites location as a definite advantage for the children attending the day-care center. Having a day-care center located on site affords parents the opportunity to visit with their children during the day. "We encourage parents to have lunch with their children and to visit during breaks," said

A decade of service to the Fermilab community



Sue Hardy, Assistant Administrator, uses peg board with three and four-year-olds to develop math skills.

Patti. The children also have the security of knowing that if there is an emergency, their parents are only minutes away.

Another plus, according to Patti, is the consistency in staff. "We do not have a lot of turn-over among the teaching staff. Many of our staff members have been with the Center for several years. This enables us to provide the children with a familiar, consistent, secure environment which is very important to a child's social, emotional and physical development." "There is a lot of bonding that takes place between the children and the teachers and among the children themselves," said Sue. Many of the children are enrolled in the Center as infants and stay until they start school. They make a lot of good friends and feel comfortable with each other.

"I have had some of the same children in my care for the entire five years I have been here," shared Sue. "When they leave to go off to school, I feel like I am losing one of my own children."

Patti, who has a master's degree from Aurora University and a B.S. in education from Illinois State University, joined the Fermilab Children's Center's teaching staff in 1980. In 1985, as enrollment grew to warrant a larger administrative staff, she was promoted to assistant to Administrator Linda Braddy. In July 1990, Patti was named Administrator when Linda resigned after 10 years with the Laboratory to pursue other educational and instructional opportunities.

Prior to joining the Lab in 1985, Sue Hardy taught nursery school for ten

years. Sue has a degree in Early Childhood Education from Elgin Community College and completed a year of general studies at Southern Illinois University. She replaced Patti as Assistant Administrator in July.

Both women are meeting the challenge of their new positions as they work with the teachers and parents to plan the daily activities for each child and uphold the philosophy upon which the program was built.

"One of the interesting aspects of having an on-site Children's Center is that it provides an opportunity for employees to talk informally about the Lab, various experiments, stupendous physics results and so on. This conversation occurs as the parents stand around in the playground at the end of the day—giving our children time to play on the swings. While they play, we discuss recent events—Laboratory and otherwise. It is a fun way to catch up on what is happening outside of one's specialty at the Laboratory (occasionally interrupted by a request to give one of the younger set a push on the swing).

To me it seems very beneficial to the Laboratory to have the occasion to exchange such comments. It is hard to quantify. I suppose what it does, is make it possible for people to work more effectively together." — Dave Ritchie, Computing Division

Applause applause applause

Connie Kania, Directorate, was feted at a reception hosted by the Friends of Fermilab Association (FFLA) on November 5 in the Snake Pit. Connie was honored for her volunteer contribution to the organization. For the past two years, Connie has donated her time to writing a column titled *We'd Like to Introduce*, which has appeared in *NewsNotes*, a quarterly newsletter sent to FFLA members.

Commemorating her contribution, Connie was presented with a bouquet of flowers and a plaque by **Stanka Jovanovic**, President of the Friends of Fermilab. In her comments, Stanka referred to the column written by Connie and its importance to FFLA. "Through Connie's effort, we came to know the accomplishments, teaching philosophies, special interests and hobbies of some very important people. Each person interviewed for the column has been involved with the Friends of Fermilab and Connie's cre-



Stanka Jovanovic presents Connie Kania with a certificate of appreciation for her contribution to the Friends of Fermilab newsletter.

ative and interesting stories about them, in many ways, were a thank you to them for their service to Friends of Fermilab." Stanka concluded by say-

ing, "It is appropriate that we now formally recognize Connie's many hours of work and thank her for the terrific job she has done."

Public Information offers tour options

Local physics teachers, Ward Haselhorst (Proviso East HS) and Walt Schearer (Glenbard North HS), who are members of the Topics in Modern Physics (TMP) development group, spent several days working with Public Information Office staff members **Barbara Lach**, **Richard Dease** and **Nancy Lanning** to provide field trip alternatives for physics classes. The purpose of the alternatives is to better meet the needs of the variety of classes which participate in Fermilab field trips. Two options of trips have been developed. The Option A program will provide students with a general overview of the Laboratory and its activities through a slide presentation, a trip to the 15th floor and a walk-through of the Cockcroft-Walton and Linac areas. This type of tour has existed for some time. The Option B

program has been newly developed for students who have had some study in the areas of accelerators, detectors and the standard model. This program will allow the students to interact with a physicist throughout the slide presentation and tour. Haselhorst and Schearer have developed a set of objectives for teachers who wish to prepare students for an Option B tour. To enable students to meet these objectives, **Cyndi Rathbun**, PIO, has assembled various materials from the TMP project into a packet which will be provided at the time of tour scheduling. Both Option A and B tours are scheduled and guided by Public Information staff.

This tour development program is part of an ongoing effort to disseminate teacher resource materials developed in the TMP project under the auspices

of the Fermilab Education Office and the Friends of Fermilab. Materials developed in this teacher-training program include laboratory exercises, lecture notes and demonstrations using puzzles, worksheets, transparency masters, bibliographies, posters, video cassettes and quizzes.

Congratulations to

David Kline (R.D./EED Controls) and wife Susan on the birth of their first child, a son, **Alexander David** born on October 24, 1990 at 2:43 a.m. Alexander weighed 6 lbs 4 oz. and was 18 inches long.

“Mr. Freeze” teaches cryogenics the cool way

If you were to ask **Mike Urso** what he does for a living, he might say he plays with science. Mike works in the Research Division/Cryogenics Department, but you will find him three days each month at various local schools presenting a Cryogenics Magic Show (Cryo Show). Mike is well suited to the task because of his knowledge of cryogenics. In addition to Mike's expertise in cryogenics, he has a theater background that guarantees a dynamic performance.

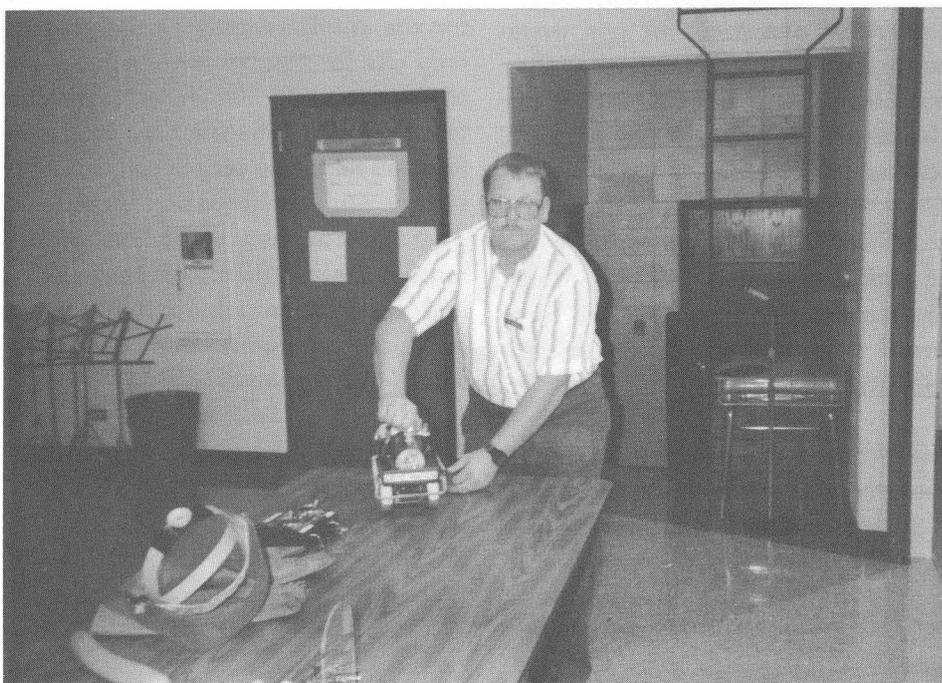
Mike's most recent Cryo Shows were presented at Georgetown School in Aurora for 520 students grades 1-5. According to Greg Anerino, Georgetown School Principal, “The Cryo Shows were intended to be motivational, and they turned out to be outstanding! Not only were they educational, but also entertaining. Mike was able to teach appropriately to the level of our students, both at the primary and intermediate shows.”

It also happened that **Bryan Billenstein**, Accelerator Division/Central Helium Liquifier, was recognized that same week as the Parent of the Week at Georgetown School. Bryan assisted Mike at the Cryo Shows.

A Cryo Show is typically one hour long. During that time, Mike shrinks and expands balloons, hammers a nail using a banana, shatters a flower, shoots a pop gun, runs the “Cryo Wagon” steam engine and any number of other child-pleasing demonstrations using liquid nitrogen. The key concept of the Cryo Show is that properties of matter change with the temperature. Mike also teaches safety aspects related to the use of liquid nitrogen. In one of his favorite demonstrations, Mike appears to insert his hand into a heavy rubber glove, then dunks the glove into a dewar of liquid nitrogen. After a brief time he removes his “hand” from the dewar and strikes it with a hammer. It



Mike Urso (top) presents a Cryo Show at Georgetown School. Bryan Billenstein (bottom) demonstrates a “Cryo Wagon.”



shatters, amid the screams and squeals of the children. He quickly reassures the students that he still has all of his fingers.

It is very clear that Mike loves sharing with students his Cryogenic Magic Shows. If scheduling is an indication, it is very apparent that the schools

love having him. Mike's show days are already booked through May of 1991. Requests for Cryogenic Magic Shows can be made through the Education Office. We would like to be able to offer this show to more schools. Any volunteers to assist in the presentation of Cryo Shows may contact the Education Office at x3092.—Robin Dombeck

Quality Corner

"We don't really like to get out front with too much unless we are absolutely certain it will be properly received."

The following suggestion was recently received by the QA office. **Denis Bowron**, Facilities Operations, prepared the response.

Suggestion: I would like to see freon gas used in air conditioning units etc. captured instead of releasing it into the atmosphere as is currently being done.

Response: Facility Operations is aware of the current freon recovery possibilities. We have seen what is available in the freon recovery market and continue to consider the purchase of appropriate devices. At the Lab, we use primarily freon 22 and 11. Some others are utilized but in small quantities. The loss of these freons to the atmosphere can occur in two ways: they are intentionally released or they leak. I would estimate that 60% of our releases are via leaks. These leaks can occur as sudden releases due to component failure or as slow leaks that could be difficult to locate and repair when the unit is operating. The planned releases are the ones that we have control over, and to which recovery procedures could apply.

The recovery process requires compressors, heat exchangers, filtration, pH adjustment and liquid storage. Because the freon being recovered could be contaminated by moisture and electrical insulation products from compressor burnouts, cleanup is important and part of the recovery process. Currently we are continuing as follows:

For R-22 recovery, we are keeping abreast of what is available. To date it has been felt that the recovery packages are heavy (60-80 lbs.) and difficult to get into many of our locations. Maintenance of the packages is often required after each use. Also, we are not sure of the quality of the recovered refrigerant without some testing procedures. This may sound negative, but the use of these portable recovery units under field conditions is not simple. We would like to see more AC units being purchased that have the ability to contain the freon within the unit during servicing.

For freon 11, we have utilized recovery methods for many years. This type of freon is one that causes a lot of concern for the environment. We use this in only one location in large equipment that contains 15,000 lbs. of freon. The fact that all of the freon 11 is at one location makes it very suitable for recovery and conservation practices. There is some new equipment on the market that would make the recovery and conservation of this material much less time consuming and it is being considered for purchase.

The QA suggestion is an appropriate one and is appreciated.

If you have a suggestion on how to improve the quality, efficiency, reliability or effectiveness of a Laboratory service or operation, please send it to **Mark Bodnarczuk**, MS 200 or BITNET Bodnarczuk@FNAL.

Heartland Blood Center blood drive

Wednesday, December 5, 1990 at 9:00 a.m. to 2:00 p.m. in the WH1W conference room. For further information, call Sharon Koteles at x3598.

The spirit of giving



Tax free payroll deductions

The time of year has arrived when employees are asked to contribute to charities through payroll deductions or one-time contributions. Using the payroll deduction plan, an employee may choose up to three charitable organizations including a community fund.

No pledge below \$12 per year for 1991 can be accepted through the payroll deduction plan. The selected charities must be among those approved by the Internal Revenue Service.

The payroll deductions an employee designates will be made every pay period, beginning January 1, 1991, and will continue throughout the year. At the end of 1991, employees taking advantage of this plan will receive a statement of their contributions for income tax purposes. Pledges for the 1990 year will end December 31 unless they are renewed.

To those of you who have given, to those of you who will give, thank you for making a difference in your community by improving the lives of thousands of needy individuals.

For additional information contact **Elvira Rodriguez** at x4632.

Salvation Army bell ringers needed

Bell ringing for the Salvation Army begins November 16 and concludes December 24.

The Salvation Army's annual Christmas bell ringing function is an important source of funds for its many charitable projects. The funds collected

will benefit children, senior citizens, the homeless and people with personal or family problems in the area.

A large number of volunteer bell ringers are required in order to meet the 1990 goal of \$80,000 established by the Aurora Corps of the Salvation

Army. If you or a family member are willing to participate, please contact Jerry Stangland at the Salvation Army. Jerry can be reached at 708-897-7265 between 9:00 a.m. and 12:00 noon daily and at 708-897-1559 after 12:00 noon. Volunteers are needed at the following locations:

Location	Address	City
Ace Hardware	944 N. Lake St.	Aurora
Ace Hardware	Douglas & Montgomery Rd.	Montgomery
Aurora Federal	20 W. Gardner Rd.	Aurora
Aurora National Bank	2 S. Broadway Ave.	Aurora
Builders Square	4400 E. New York St.	Aurora
Eagle Foods	Douglas Ave.	Montgomery
Eagle Foods	1650 N. Randall Rd.	Aurora
First American Merchants Bank	1851 W. Galena Blvd.	Aurora
Fitzhugh's	1030 Fox Valley Center	Aurora
J. C. Penney's	195 Fox Valley Center	Aurora
Jewel Food Store	Ogden & Washington	Naperville
Jewel Food Store	954 N. Lake St.	Aurora
Jewel Food Store	Rte. 30 & Douglas Ave.	Montgomery
K-Mart	1900 Douglas Ave.	Montgomery
K-Mart	Ogden Ave.	Naperville
Mall	195 Fox Valley Center	Aurora
Merchants National Bank	34 S. Broadway Ave.	Aurora
North Aurora K-Mart	320 S. Lincolnway	Aurora
Ogden Mall K-Mart	Ogden Ave.	Naperville
Old Second National Bank	River & Downer	Aurora
Sears Roebuck & Company	195 Fox Valley Center	Aurora
Service Merchandise	526 S. Rte. 59	Naperville
Town & Country Drugs	1901 W. Galena Blvd.	Aurora
Walgreen Drug Store	1900 Douglas Ave.	Montgomery
Walgreen Drug Store	212 N. Lake St.	Aurora
Walgreen Drug Store	1014 N. Farnsworth	Aurora
West Plaza Jewel	1952 W. Galena Blvd.	Aurora

Annual Report wins award for excellence

Fermilab was recently notified that the *1989 Annual Report* won an award for excellence at the 18th Annual Chicago Chapter STC Technical Publications and Art Competition.

There were 126 entries in the publications competition. Six won distinguished recognition and 14 won awards for excellence.

The *1989 Annual Report* was submitted to the competition by Carol Carlson and Joan Abern, consultants with TP&T, a technical communications consulting firm, who worked with **Chuck Brown**, technical editor, **Angela Gonzales**, designer, **Reidar Hahn**, photographer and many Fermilab authors on the writing, design and production of the publication.

Clas\$ified ad\$

Miscellaneous:

New Balance 675 running shoes, size 11B, almost new, \$25. Call Geoff Bodwin at 708-972-6229 or 708-985-1419.

Shop Smith Mark V multipurpose woodworking tool incl. saw, drill press, lathe, disc/drum sander blades, lathe tools and router bits, \$850. Call John at x2697.

Navy & white hide-a-bed & clubchair, camelback style, incl. 4 throw pillows, \$150. **Oak 5-drawer chest & mirror**, contemporary style, \$110. **Walnut china cabinet**, contemporary style, \$75. **1949 Singer sewing machine**, just overhauled, \$100. All items in excellent condition. Call Ann at 231-9518 or x4438.

IBM compatible computer, 640K, CGA card, mouse, 1,200 baud modem, 3.5" disk drive, two expansion slots, MS DOS 3.3, word processor, spreadsheet, etc., \$350 o.b.o. Call Mike at x4518.

Motorized vehicles:

White fiberglass truck cap for full-size Chevrolet, \$75. **1974 Kawasaki 250 motorcycle dirt bike**, \$80. **1979 Chevrolet 1-ton single-wheel pickup truck**, 454 CI 4 spd., with truck cap and many new parts, \$3,500 or best offer. Call 232-4243, ask for Bryan or leave message on recorder.

1984 Olds Cutlass Supreme, AC, ps., pb., cruise control, tilt steering wheel, Landau roof, wire wheels, maintained well, 67,000 mi. This car needs nothing repaired or replaced, \$3,900. Call Ann at 231-9518 or x4438.

1989 Chevrolet C1500 Scottsdale pickup, V-8 (305), 5 spd. OD, AM/FM cass., excell. cond., must sell, \$8,500. Call Lou at x3343 or 708-653-4336.

1988 Ford Escort, 2 dr hdt, 4 spd. trans., rear window defog., AC, electronic seatbelts. No money down, take over payments. Call Tony at (708) 552-1014 after 4:00 p.m.

CPR classes

The Fermilab Fire Department will be offering two cardiopulmonary resuscitation classes (CPR). The eight-hour class is for those who have never taken a CPR course. The four-hour class will be a refresher for those wishing to renew their yearly CPR card.

If you wish to attend either of the classes you will need to obtain your supervisor's permission. Once this has been accomplished, contact Neil Dal Cerro at MS 302 with your name, mail station, division/section, extension and class specification.

Persons attending a 1990 CPR class will be notified six weeks prior to the expiration of their cards.

— Neil J. Dal Cerro

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