

Ferminews

FERMI NATIONAL ACCELERATOR LABORATORY

Wilson Hall construction project to begin

Mezzanine to be added

Construction will begin on April 6 for a Wilson Hall renovation that will add 6,000 square feet of new office and conference space to the central laboratory facility. A mezzanine floor between the ground floor and the first floor is being added to the north end of Wilson Hall. The construction project is estimated to take about 6 months.

Entrances and parking areas to be closed

"There will be varying levels of impact upon employees and visitors during the two phase construction project," said Wilson Hall Building Manager Kent Collins. The first phase of the project will have the more significant degree of impact. During this phase, parking areas on the west side of Wilson Hall near the hi-rise and the Linear Accelerator building will be closed to allow space for the construction company to store and move equipment and materials. Also, the west bank of elevators will not serve the ground floor during this nearly 15-week phase and the west side ground floor entrance (by the mailroom) will be closed.

During the second phase of the project, parking on the east side of the building will be reduced and east bank elevators will not serve the ground floor. This phase of construction is estimated to last about six weeks. While the east elevators are affected by the project, the handicapped parking area and designated entrance will be moved to the west side of the building. According to Collins, every effort is being made during this project to accommodate individuals who require elevator service from the ground floor. But, despite the fact that vigorous efforts are being made to reduce the impact, people are going to be inconvenienced. "It is a fact that elevator service will be affected, parking will be reduced, entrances closed and there will be transmittal of construction-related noise in the building," said Collins.

Facility Engineering Service Section is making it a top priority to insure that the safety and health of those visiting or working in Wilson Hall are protected and that special needs employees are accommodated. To allow employees to plan ahead for parking lot, entrance and elevator closing, *Ferminews* will announce scheduling information when possible and the Fermilab Information Channel (9) will provide day-to-day reports.

Overflow parking

Although parking near Wilson Hall will be reduced during this project, additional parking is available at the Pine Street overflow parking lot located west of Wilson Hall and south of Pine Street. The lot accommodates 125 cars and four buses. A bark path through the woods provides easy access to Wilson Hall and the Linac.

Plan ahead to minimize problems

This project will provide needed office and conference space to the Laboratory's over-taxed main administrative facility, but, as with all construction projects, it will not be without its painful moments. Members of the Fermilab community can help mitigate the problems of this less-than-perfect situation by planning ahead. Arriving earlier will allow more time to find parking; forming carpools or getting rides during the construction period will reduce parking problems; and taking the stairs when possible will alleviate the strain on the elevators. "The next several months with the Tigers and the construction in Wilson Hall will be trying," said Bruce Chrisman, Associate Director for Administration. "We must all remain flexible and keep a sense of humor to help us through these times." Think positive—these small changes afford the inhabitants of Wilson Hall an opportunity to conserve fuel, make new friends and possibly achieve peak cardiovascular conditioning!

inside

**CDF and DØ
prepare for
run
page 2**

■
**Site-wide
property
review and
cleanup
page 4**

■
**Art & Lecture
series
page 7**

Ferminews is published by the Fermilab Publications Office.
MS 107, P.O. Box 500
Batavia, IL 60510
708 840-3278
FNAL::TECHPUBS

The deadline for the Friday, April 3 issue of *Ferminews* is Wednesday, March 25. Please send your article submissions or ideas to the Publications Office.

Fermilab is operated by Universities Research Association, Inc. under contract with the U.S. Department of Energy.



Waste management training at Fermilab

Awareness of hazardous materials and situations is the first step in the process of educating people who work with dangerous materials and in hazardous environments. Bill Freeman, ES&H group leader of the Research Division, and Accelerator Division ES&H Department Head Howard Casebolt helped develop the training currently in place at experimental areas like CDF and DØ. The training encompasses general radiation training, supervised access training, general electrical rules, hardhat rules and rigging requirements, plus specialized training for individual departments. Freeman says making employees familiar with potentially dangerous situations and materials "gives the assurance that people going into the pits are aware of the hazards."

Research Division Safety Coordinator Sylvia Wilson says that rapidly-changing federal and state regulations make it difficult for all employees to know the entire list of what constitutes hazardous and mixed wastes. The one piece of information all employees should remember is the name of their immediate waste coordinator. She offers one piece of advice: "Genera-

continued on page 3

Laboratory prepares for collider run

Work in progress at DØ and BØ to install new and upgraded detector equipment will open doors to yet unexplored territory in colliding beam physics during the Spring collider run. The most sought after prize-in-hiding, should it be discovered, will of course be the top quark. But what forces have been driving the work? Are eager experimenters, caught up in the swirl of deadlines, and time-conscious Fermilab employees overlooking safety regulations in their haste to finish projects?

The answer is no according to Fermilab project managers and safety officers. Even though the time constraints of getting the colliding beam physics program off the ground have been coupled with a stream of mandated Environment, Safety and Health (ES&H) regulations, work is moving ahead as scheduled—and it is doing so using safety, health and environmentally-conscious programs.

At CDF

At CDF, where major upgrades to the detector have occupied physicists, technicians and engineers since the end of the last collider run, the last of the finishing touches has all but been applied. The giant detector will soon roll into

place behind a massive wall of 50-ton bricks, the accelerator will be turned on and the run will begin. Periodically throughout the run, detector components will have to be replaced, and personnel will have to access the sealed collision hall.

What materials can be brought into and out of a beam enclosure? Who can bring them there? And who gets clearance to enter? The answer to the last question: anyone. Anyone, that is, who has taken and passed a hazard awareness training course.

Hazard awareness training is the collective term applied to the formal training required for entry into potential radiation areas. The philosophy of alerting workers of safety regulations in hazardous areas has existed since Laboratory operations be-



DØ Safety Coordinator Wayne Schmitt inspects a waste storage container inside a secondary containment unit.

gan. Today, that philosophy has solidified into a concrete policy that coexists in equal importance with every project or job's deadline. In the case of CDF, "The goal is to make sure everyone who goes into the detector area is aware of the hazards," says Department Head Bob Kephart.

Kephart is quick to point out that CDF is not the only area where hazard awareness training is a way of life. DØ and the Accelerator Division also require training

for employees who want to work in or around detector areas or beam enclosures. Beyond the Research and Accelerator Divisions, users and contractors who work in these areas are also required to complete and pass the same training.

CDF hazard awareness training consists of three hours of general radiation training, source radiation training and radiation waste disposal training, followed by a written examination. Already close to 400 of the 700 CDF personnel have completed and passed the course. Only after a person has passed the course is he or she eligible to receive a building key to enter controlled areas. Operators responsible for keys will not check them out if a computer database determines that an individual has not received the necessary training. "We are demonstrating that there is a way to follow the regulations without hampering regular activity," Kephart explains.

The substantial improvements that the CDF detector has recently received create new demands for safety regulation. The upgraded CDF will employ a new

trigger to filter events at a quicker rate; a new tracking device called the Vertex Tracking System; a Silicon Vertex Detector to identify hadrons containing the bottom quark; and a muon system that essentially surrounds the detector's perimeter. The addition of more parts to the detector increases the likelihood that some of the electronics will require repair during the run. Repairing the detector while it is on the assembly hall floor is a straightforward task. Once the detector has been rolled into place and the accelerator turned on, however, repairs become increasingly more difficult.

To understand why gaining access to controlled areas now requires preliminary training, it helps to understand some of the motivation behind the regulations regarding disposal of waste materials. Mixed waste - waste that is both radioactive and hazardous - would cost \$2,500 per barrel to have removed from the Laboratory site if a moratorium on its removal was not in place. Radioactive waste costs \$500 per barrel, according to Tony Leveling, radiation safety officer for the Accelerator Division. Radioactive and hazardous waste training stops the waste accumulation problem before it begins. A technician using ethanol to clean beamline tubing now knows that the hazardous substance can

become contaminated with radiation once used inside a beam enclosure. In accordance with the 1991 Waste Minimization and Pollution Prevention Awareness Plan, ethanol may no longer be used in such a situation. "This has led to a drastic reduction in the amount of waste we're generating as a division," Leveling says. "It has also led to a cleaner beam enclosure without any junk laying around."

If a worker leaves some unidentifiable chemical substance in a beam enclosure, it could require laboratory analysis to identify it. "These are called 'unknowns' and can cost hundreds of dollars," Leveling adds.

Hence a need for Accelerator operations personnel to undergo testing similar to CDF personnel. Questions measuring competence in waste disposal techniques and waste generator responsibility, to name only two of the topics covered in the test, determine whether or not an employee or user is qualified to enter a controlled area.

At DØ

It's difficult to see work being done on the DØ detector these days—largely because the detector is already in place and the collision hall wall climbs nine-tenths of the way to the ceiling. Behind the wall though, a flurry of last-minute alignment activity is taking place to confirm that every component is properly positioned. DØ Construction Head Roger Dixon's crews are busy shaking down the electronics, looking for problems-in-waiting. Never mind that the detector has yet to be baptized in a collider run, DØ technicians and physicists have already been introduced to the hazards that may face them after its commissioning. With Muon chambers hanging from the ceiling and a vertical maze of trusses clinging to the detector's sides, DØ Safety Coordinator Wayne Schmitt has made it a point to ensure that hazard

As new electronics are added to the detectors and repairs made to the accelerator, the level of safety training will rise in correspondence, DØ Safety Coordinator Wayne Schmitt predicts. "With every new set of hazards we are presented, we will present people with that information."

awareness training is presented at the new detector. But Schmitt admits that he can't do his job alone. "We've basically got an aircraft carrier manned by a dozen people," says Schmitt referring to the detector's comparative size-to-personnel ratio. "We're spread pretty thin." Because he can't

personally oversee everyone's safety, Schmitt instead administers the DØ version of hazard awareness training. To work in the pit (assembly area), an individual needs to have taken the training. "No one gets a key until he or she has taken the test," Dixon says. Why the formality of a test? "You have to be a bit more formal when there are groups of people working on different shifts," Dixon adds.

In addition to testing personnel on safety issues involving high voltage in the toroid magnet, flammable gas in the detector and access to the collision hall, Schmitt responds to and documents OSHA violations, inspects hardware and inventories hazardous materials. As an ES&H resource, he has the responsibility of maximizing the safety of workers and the environment while permitting work to roll along at an unfettered pace. "(Some of the rules) may sound like nitpicking, but we think they're important," Schmitt says. —*Brian Dick*

Waste management training at Fermilab

tors should know who to go to if they don't know what to do with what they're making."

Waste-related terms are defined below from the *Fermilab Safety Manual*. Where possible, examples are listed to illustrate commonly-used substances.

Generator - The person(s) involved in the activity or process which produces a hazardous waste. Generators are responsible for the identification, packaging, labeling and temporary storage of all regulated chemical waste generated. Generators are also responsible for the long-term storage of mixed wastes.

Hazardous waste - Waste material which is ignitable, corrosive, reactive or toxic. Examples are caustic soda, solvents, degreasers, acids, bases, laboratory chemicals and certain unused manufactured chemical products.

Mixed waste - Waste material which is radioactive and hazardous. There is presently no approved method of disposal for mixed wastes and long-term storage is required. Such storage is the responsibility of the division or section which generated the waste.—*Brian Dick*

Laboratory embarks on site-wide cleanup and property review

The Laboratory Director has initiated a vigorous property and materials review and site-wide cleanup in preparation for the Tiger Team Assessment scheduled to begin May 11. Business Services Section has been charged with coordinating this effort.

Warehouse space critical—Business Services Section to spearhead property review and disposition

Jim Finks, Business Services Section head asked Dave Carlson to spearhead the effort. According to Carlson, assistant head of Business Services, this year's property review is a concentrated, intense version of the on-going program in place at the Laboratory. "Every year, Business Services sends memos to the division and section heads asking them to review the property that they have in warehouse storage and make decisions regarding its programmatic value," said Carlson. "In conjunction with this process, we conduct walk through tours of the storage areas with representatives from all divisions and sections. This year we are intensifying the effort. The warehouses are full, the railhead is nearly full, and as a Laboratory, we are embarking on a major cleanup." According to Associate Director Bruce Chrisman, this is not the same as "spring cleaning." Although, some divisions and sections are asking employees to do a thorough cleanup of their areas, the property review involves making decisions about the future of equipment, materials and property currently stored in the warehouses and in buildings. "Some of this stuff has been in the warehouses for several years; it's time to make a decision about its usefulness. We need to free up warehouse space," said Director John Peoples. With the present and on-going Laboratory emphasis on good housekeeping, warehouse storage space is becoming critical.

Support pledged from Support Services

In order to assist with the storage or disposition of property, the Support Services groups plan to work extended hours. The Distribution group (Dispatch

Office) will be available to help the divisions and sections move materials into storage or scrap areas. The Property and Warehouse groups will assist people in the excessing or scrapping of materials stored in the warehouses or buildings. All of this will be done according to Department of Energy property management regulations.

When evaluating stored materials or equipment, managers must make the decision as to whether or not the property has future value to the Laboratory, or if it is obsolete, unserviceable or uneconomical to repair. "Information from technical personnel is very important," said Carlson. "The Property Office will rely on this information to determine if the property should be excessed (listed for use at other government facilities), scrapped (sold through a contract with a scrap dealer) or trashed.

Although the property review and lab-wide cleanup is gaining momentum as May rapidly approaches, division and section leaders have been intensively involved in this process for months and for some it is a continuation of a strong on-going program.

Everyone's involvement needed for project success

Computing Division

According to Vicky White, Computing Division Associate head, for more than six months the Computing Division has been reviewing all properties which are part of the Computing Division equipment pool. "We have already excessed or found obsolete close to 1,000 items," said White. Included in this cleanup were "many, many old computing 9-track tape drives which were excessed and several VAX-780 computers and PDP-11 computers which were decommissioned and excessed," said White. Also under way is a massive program headed by Judy Nicholls to get rid of tapes in the tape vault that are no longer needed or useful. Art Neubauer has been asked by the Computing Division to survey the operational groups and estimate the total warehouse storage requirements for the immediate future and the next 6 months. According to Neubauer, any items to be put in indefinite storage should be reviewed carefully to determine if a better choice may be excessing or scrapping them. "All too often 'out of sight is out of mind,' and the equipment is forgotten and stays there forever," said Neubauer.

Accelerator Division

The Accelerator Division is embarking upon a cleanup effort that involves both housekeeping and prop-

The warehouses are full, the railhead is nearly full, and, as a Laboratory, we are embarking on a major cleanup.
—Dave Carlson

erty evaluation. Bob Mau is heading up the general cleanup. Over the next month, dumpsters will be placed outside all buildings and the Accelerator Division plans to go through their buildings wing by wing, cabinet by cabinet. "Anything that is no longer useful will be trashed, scrapped or excessed and anything that does not need to be immediately accessed will be moved to warehouse storage," said Dave Finley, Accelerator Division Associate head. Rich Andrews and Vinod Bharadwaj are leading the warehouse review drive and will accompany department heads to the storage areas to evaluate equipment and materials currently in the warehouses. The Accelerator Division will also continue with its practice of completely cleaning all accelerator beam enclosures and dusting the magnets, as has been the custom after any shutdown to eliminate debris that after running could become radioactive waste. Finley also cited the work done under the leadership of Dave McGinnis in the Booster Department. They have completed cleaning all the booster beam enclosures and office areas.

Research Division

According to Bob Trendler, Research Division Associate head, the Research Division is focusing on the development of its Building Managers Program to maintain housekeeping and ES&H standards in all areas at all times. This is being done by the ES&H group lead by Bill Freeman in concert with Site Operations headed by Bruce Baller. Another major area of concentration for the Research Division is bringing the fixed target experiments to a safe shutdown state during the Collider run. "We are also conducting a review of all the materials and equipment our Division stores in the warehouses," said Trendler. Research Division sent storage records to all department heads and asked them to be actively involved in the evaluation of stored equipment. Vickie Davis is arranging warehouse walk throughs to eliminate unused articles using Directorate guidelines. "We are aggressively deciding if equipment should be excessed or scrapped and determining our needs for storage," said Trendler.

Technical Support Section

The Technical Support Section requires a significant amount of storage space for expensive, but seldom used tooling. In order to free up space in the Laboratory's two on-site warehouses, Technical Support is looking very seriously at what is being stored and also at storage alternatives for what must be kept. As for housekeeping, that is a very fundamental issue for Technical Support. "We can't work efficiently if equipment is not properly stored and maintained," said Paul Mantsch, Technical Support Section head.

"To us, housekeeping is intrinsic to our ES&H and quality control programs," said Mantsch. "The environment relates to the type of work we do. For example, superconducting magnets must be manufactured in a clean place. A piece of foreign material can puncture the thin insulation of the magnet causing the magnet to fail."

According to Mantsch, Technical Support got very serious about housekeeping about two years ago. "It has taken a long time to change attitudes, but now just about everyone is on board," said Mantsch. He points out that the Technical Support environment is more controllable than the experimental areas. "Ours is a very structured environment. The flow of materials is regulated; there is not the tendency to accumulate unneeded materials. This is all part of our quality control," said Mantsch. The management in Technical Support thinks that a significant attitude change has taken place in their section. "The actions of the group leaders demonstrated the seriousness of our effort and it has worked its way down in most cases," said Mantsch. "More work is done in a well kept-environment."

Business and Laboratory Services Sections

Business Services and Laboratory Services Sections are both working to strengthen on-going programs. Both Jim Finks, Business Services Section head and Chuck Marofske, Laboratory Services Section head, are continuing their practices of conducting monthly ES&H and maintenance tours of their offices and buildings. They are also conducting property reviews of items in storage.

A call to action

The property review and site-wide cleanup is well underway, but the success of the campaign is dependent upon the involvement of everyone at the Laboratory. "All groups must be actively involved in the evaluation, and proper disposition and storage of materials and equipment," says Dave Carlson. Many ES&H hazards are the direct result of poor housekeeping—such as blocked aisles and exits. Adequate storage space is essential to being able to eliminate these problems. According to Bob Trendler, we all tend to store too much. "It's time for all of us to evaluate materials being stored and keep only what is needed."

It is time for all of us to evaluate materials stored and keep only what is needed.
—Bob Trendler

What's new in the pamphlet rack

Anheuser-Busch Theme Parks club-Sea World, Busch Gardens and Cypress gardens are all included. The new 1992 club membership offers 15% off general admission to all the parks, plus discounts on merchandise, lodging, transportation and meals.

Indiana Beach- The 1992 VIP coupons have arrived offering \$4 off the price of the Indiana Beach Water Park package, \$2 off the pay-one-price ride session and \$2 off one night of camping.

Stop by and pick up these coupons to savings. The pamphlet rack is located in the Activities Office, WH1E.

Quality corner

The Quality Assurance and Conduct of Operations Office would like to receive suggestions from employees or users on how to improve the quality, efficiency, reliability or effectiveness of Laboratory services or operations. Please send your suggestions to Mark Bodnarczuk, MS 200 or FNAL::Bodnarczuk.

Notice from the Medical Office

Return to work certification

In the *Personnel Policy Guide*, Section 12 there is a clear statement regarding required physician notification for employees who lose more than three consecutive working days for medical reasons. The policy states: *When an illness necessitating an absence in excess of three consecutive working days occurs, the employee must provide a statement from a physician giving a diagnosis and authorizing return to work. The statement is to be given to a nurse in the Medical Department. No paycheck will be issued for time requiring certification, if that certification has not been received.*

The Medical Department would like to remind all employees that a return to work certification from a private physician must be brought to the Medical Department when an employee returns from sick leave. The Medical Department will issue a return to work slip that is to be given to the employees supervisor. The physician's certification must include not only authorization for return to work, but a diagnosis of the illness or reason for the absence and a list of any necessary work restrictions. An employee should **not** give a private physician's certification to his or her supervisor or attach it to his or her timesheet as has been occurring.

Supervisors should be reminded that if an employee has been on sick leave for more than three consecutive days, he or she should not return to work without a return to work slip from the Fermilab Medical Department. If employees return without a slip from the Medical Department they should be sent to the Medical Department before beginning work.

For further questions regarding this issue, employees may contact the Medical Department at x3232.

The changing of the guard



New guard houses have been installed at the Batavia and Pine Street entrances. According to Rudy Domer, BS/Emergency Services, the safety and the efficiency of the approximately twenty-year-old guard houses were not good. The new houses have improved ergonomics and will soon be equipped with computer terminals to facilitate off-hour access.

Fermilab International Film Society

April's screenings will be shown in Ramsey Auditorium at 8 p.m. Admission is \$2.

Friday, April 3: *The Nasty Girl*: German student debunks the myth that her Bavarian hometown was a bastion of underground resistance to the nazis in this surrealist satire. Michael Verhoven, director. Germany, 1990, 92 minutes.

Friday, April 24: *Barton Fink*: Filmmakers Joel and Ethan Coen won the 1991 Cannes prize for the story of a seemingly innocent playwright in a sinister, claustrophobic Hollywood of the 1940s. U.S. 1991, 116 minutes.

EAP offers stress management class

The Employee Assistance Program (EAP) office is offering a stress management class for interested Fermilab groups. The one-session class takes approximately one hour and includes a video presentation, short lecture, a question and answer session, a workbook and a short exercise. Anyone interested in scheduling a stress management class or obtaining further information may contact Eleanor Thomas-Grumbach, EAP, x3591.

Fermilab Lecture Series presents

Awakenings Revisited

Dr. Oliver Sacks, Neurologist & Author

Friday, April 10, 1992 at 8:00 p.m.

In 1965, as a young neurologist, Oliver Sacks encountered a group of patients in the back wards of a chronic-care hospital in the Bronx—a group of patients who would change his conceptions of health and disease, and who raised for him the most general questions of suffering, care, and human condition. Dr. Sacks updates the fascinating story of these patients who were the topic of his book *AWAKENINGS*, and the film of the same name, when he visits Ramsey Auditorium on Friday, April 10, at 8 p.m.

These eighty men and women were modern-day Rip van Winkles, survivors of the great sleeping-sickness epidemic which struck just after World War I. Frozen in decades long-sleep, they had been given up as hopeless and forgotten until Dr. Sacks gave them the then-new drug, L-DOPA, which had an astonishing, explosive, “awakening” effect — bringing them back

to life after an absence of as much as forty years. Dr. Sacks tells the story of these courageous individuals and their reactions to their extraordinary transformation.

Hailed as a medical classic, *AWAKENINGS* was first published in 1974 and won the Hawthornden Prize in 1975. It was the inspiration for *A KIND OF ALASKA*, a one-act play by Harold Pinter, and a major film starring Robert De Niro and Robin Williams. In his lecture *AWAKENINGS REVISITED*, Dr. Sacks will follow up on the patients featured in *AWAKENINGS* as well as look at some of the types of treatment which reached these patients, including music therapy.

“Oliver Sacks is a most unusual man, as much metaphysician as physician: passionate, inquiring, generous, imaginative and supremely literate.”—*New York Times*. Dr. Sacks was raised in London, and obtained his medical degree from Oxford University. As a physician and writer, Sack’s goal is to humanize medicine - to recognize the link between body and soul. He published *MIGRAINE*, his first book in 1970. *AWAKENINGS* was originally published in 1974 and revised in 1984. Also in 1984 Sacks published *A LEG TO STAND ON*, an autobiographical account describing his temporary loss

of the use of his leg. His phenomenally successful *THE MAN WHO MIS-TOOK HIS WIFE FOR A HAT* is a collection of case studies of people whose worlds are profoundly altered by neurological disorders. In 1989, Sacks was the recipient of a Guggenheim Fellowship for his work on Tourette’s Syndrome.

Admission to Dr. Sacks’ lecture is \$3. Tickets are non-refundable. For further information or telephone reservations, call 708-840-ARTS weekdays between 9 a.m. and 4 p.m. Phone reservations are held for five working days, but will be released for sale if not paid for within that time.

Fermilab Arts Series presents

Eugene Friesen & Friends

Eugene Friesen, Paul Halley & Glen Velez of the Paul Winter Consort with Special Guest, Larry Gray, Bass

Saturday, March 28, 1992 at 8:00 p.m.

With roots in classical, jazz and sacred music, rhythmic influences derived from travels in six continents, and an improvisational flair honed as members of the famed Paul Winter Consort, **Eugene Friesen & Friends** create music that is truly contemporary and resoundingly American. Experience the beauty of this music as **Eugene Friesen & Friends** perform at Fermilab’s Ramsey Auditorium on Saturday, March 28, 1992.

Says Friesen, “Each of us has been enriched tremendously by international culture and world music styles. The quartet work encourages flexibility in our musical

roles to produce a large variety of sounds and moods, and at the same time lets each instrument shine individually.” Improvisation provides the spark of much of the group’s music, and it is this spontaneous composition which makes their concerts unique. It is also an art that has brought them much praise. “The most passionate and inspirational offering came at the close of this extraordinary evening when cellist Eugene Friesen and pianist Paul Halley showed how improvised material could be honed into structurally lucid yet gloriously immediate works. Friesen’s frenzied bowings and soaring melodies, combined with Halley’s mellifluous tone and subtle harmonic shifts, sent many in the audience home in a state of musical rapture.” (*Washington Post*)

Another significant element is the group’s musical diversity. Eugene Friesen plays cello and electric cello, and often doubles his melodies with vocals for an exciting and haunting effect. Paul Halley brings a vast compositional sense to his majestic and songful piano playing, while Glen Velez exudes absolute mastery on a wide variety of exotic percussion instruments ranging from frame drums

of many cultures to the Australian bullroar, the Caribbean steel pan, and buzz sticks from the Philippines. Special guest Larry Gray is a multifaceted bass player. A native of Chicago, he has performed with Sonny Stitt, toured with Marian McPartland, and played in the bass section of the Chicago Symphony Orchestra under the direction of Erich Leinsdorf.

Admission to **Eugene Friesen & Friends** is \$9. Tickets are non-refundable. For further information or telephone reservations, call (708) 840-ARTS weekdays between 9 a.m. and 4 p.m.

How they got hurt

The leading causes of on the job injuries

Impact accidents

In the last issue of *Ferminews* we presented the number one cause of on the job injuries—physical overload. The second most common cause of worksite injury is impact accidents—being hit by, or hitting an object. The best ways to avoid impact accidents are to be alert to potential hazards (for example, never walk under scaffolding or cranes), to use the appropriate personal protective equipment necessary for the hazards you face (such as hard hats, eye protection, etc.), and to follow the Laboratory's established safety guidelines.—*Parlay International*

Reminder

Stockrooms to close for inventory

Wilson Hall Stockroom: Closed Friday, April 17, at noon. Open Monday, April 20, at 12:30 p.m.

Site 38 Stockroom: Closed Monday, April 20 and Tuesday, April 21, all day both days.

Classified ads

Vehicles

1984 Ford Escort 2-dr, hatchback, sunroof, am/fm cassette, 54k miles, new tires, \$1,200 o.b.o. Call Daniel at x3604 or 708-416-0195.

1984 Ford Tempo GL, 75 k miles, am/fm radio, automatic, runs well. Contact Marcello at x3765, 708-406-0851 or FNAL::MARLO.

1987 Nissan Sentra XE, 5-spd, 4-door, 63k miles, 4 new tires, new exhaust system, excellent running condition, clean, one ding, \$3,000. Call Barbara at x3492 or 708-859-8699 after 5 p.m.

Micellaneous

For sale; Genesis water treatment system, 4 functions in one—filter, clarifier, softener, removes bad taste and odor. Removes 99.8% contaminants. Electronic computer measures family usage. Solid state parts. Rids iron at 3 ppm. Will help with installation if needed. Price \$650. Call Dave at x4533 or 708-552-1320.

For sale: Fiber glass, whirlpool bathtub, 31" x 60", light beige, chrome jets. Retail for \$1,000, will sell for \$500. Call Ruth at x3281.

For sale: automatic washer and dryer (gas), Montgomery Ward, white, \$50 o.b.o. Rocker, \$7. Charcoal grill, adjustable 4-position fire pan, \$5. Child's car seat, \$4. Pool, 3' x 12' with 2 filters, ladder plus accessories, \$85. Contact Marcello at x 3765, 708-406-0851 or FNAL::MARLO

For sale: Men's Free Spirit 10-spd, \$90. Men's Schwinn continental 10-spd, \$90. Call 708-584-6698 after 5 p.m.

0.45 Carat Marquis cut diamond ring with accompanying gold ring. Appraised at \$1,600. Will sell for \$850 or reasonable offer. Call Mike at x4860.

Real estate

For rent: Large studio apartment in Aurora, \$275 per month and one bedroom apartment in Aurora, \$400 per month. Call Barbara after 5 p.m. at 708-859-8699.

NALREC News

Recaps

The ski trip was fantastic—minimal injuries, maximum fun. If you weren't able to attend, hope you are able to see some of the great pictures floating around. Thanks, Nancy.

Hope you got lucky at the "you don't have to be Irish St. Patrick's Day party." Good job, Connie and Dominick.

There was a great turn out for the Candlelight Bowling. Good food and a good time. Let's do it again, Dominick

Upcoming events

June 13-14 are the dates set for the two day rafting trip at Wolf River, Wisconsin. Just \$75 for one night Motel/Lounge, bus ride, plus snacks to and from, total of 10/12 hours rafting and \$20 for Indian Reservation Gambling. See Dominick x3187 with a \$25 deposit to secure a seat. More information later.

Really in the works: a horseback riding trip and White Sox games in Milwaukee and Detroit. More later..

Attention all baseball fans: We will be going to see the Kane County Cougars in 1992. Fermilab Day will be Saturday, June 13 at 7 p.m. It's a Saturday night; keep it in mind.

Next issue of *Ferminews*: April Social Hour information.—*Charlotte Smith*

Library freebee

Thomas Register of Manufacturers, Products & Services, 1990 edition, multiple volume set is available for giveaway to the first taker. Can be picked up in the Library, WH3X.—*Paula Garrett*

Harper's index

Percentage of all Nintendo users who are over the age of 18: 42.