

HazTech

T R A N S F E R

Great Plains/Rocky Mountain Hazardous Substance Research Center

'97 conference plans set for Kansas City

Plans are underway for the 12th annual Conference on Hazardous Waste Research, sponsored by the Great Plains/Rocky Mountain Hazardous Substance Research Center, set for May 20-22, 1997, in Kansas City, Mo. This year's conference theme is "Building Partnerships for Innovative Technologies," and the focus will once again be on the various aspects of research, education, and technology transfer and training in the Great Plains and Rocky Mountains.

Participants are encouraged to submit technical papers for oral or poster presentations. Possible topics include partnerships and technology innovation, bioremediation, mine waste remediation/reclamation, environmental fate and transport, and other related topics. An insert in this issue of *HazTech Transfer* offers further details on the call for papers, as well as other conference details.

Several workshops, to be held prior to and fol-

lowing the main conference, are also in the planning stages and will cover such areas as phytostabilization of heavy metals, wastewater remediation, and an eight-hour HAZWOPER refresher course.

Co-sponsors of the 1997 conference include the U.S. Environmental Protection Agency, Waste-management Education and Research Consortium, National Institute of Environmental Health Services, and the National Mine Land Reclamation Center.

HSRC research spawns enterprise

Research by Ken Klabunde, a Kansas State University distinguished professor and HSRC-funded researcher since 1990, is behind a new Manhattan, Kansas, business and K-State's latest startup company to commercialize a university-created technology.

Nantek Inc. will commercialize Klabunde's Destructive Adsorbent Technology, DAT. The technology harnesses the power of a new class of advanced materials, called nanoparticles, to safely detoxify hazardous substances such as nerve gases, insecticides, and PCBs.

DAT has both civilian and military applications for environmental and safety problems, including development of processing plants to dispose of nerve gases or to clean up PCB-contaminated soils. It also could be used for protective ventilation systems in vehicles, and ship and chemical plants.

Nantek is the licensee for the technology, while K-State will have equity ownership and receive royalties based on the company's success.

Reprinted by permission from *InView*.

HSRC-funded research team receives NSF grant

Researchers at the University of Nebraska recently received a National Science Foundation (NSF) grant through EPSCoR (Experimental Program to Stimulate Competitive Research).

The proposal, "Environmental Processes for Accelerated Bioremediation of Xenobiotics in Soil and Water," was awarded a two-year, \$430,000 grant from NSF and \$220,000 in match from Nebraska EPSCoR and is one of two new research clusters funded in the program.

Principal investigators (PIs) include Pat Shea and Steve Comfort (Applied Organic and Environmental Chemistry), Tian Zhang (Environmental Engineering), Garald Horst (Applied Plant Physiology), and Rhae Drijber (Soil Microbiology and Ecology), who are working with a team of chemists, microbiologists, and others in the areas of soil chemistry and physics, biotechnology, toxicology, and engineering to study fundamental processes and alternative technologies in remediation.

The research group is interested in developing

continued on page 3

On page...

Articles

Center Updates	2
Call for papers for	2
electronic journal	
Progress on proceedings	6

Regular features

Consortium directory.....	3
Project profile:	4
Center profile: Karl Burgher.....	6
Calendar.....	8

HSRC *Update* on center activities

HINU and HERS involved in TOSC project

Staff from Haskell Indian Nations University (HINU) and the Haskell Environmental Research Studies Center (HERS) spent several weeks traveling in Indian country as part of the HSRC's Technical Outreach Services to Communities program.

HINU instructors Mike Tosee and Bill Curtis traveled with Dana D'zurella, a HERS staff member and former HINU student, to Native American nations in Florida, Idaho, and New York. The trio visited the Seminole Nation in Florida, the Coeur d'Alene Nation in Idaho, and the Mohawk Nation in upstate New York.

The purpose of their visits was to document hazardous substance and other environmental problems that each nation is experiencing. HINU and HERS staff met with tribal environmental officials, tribal leaders, and tribal members, documenting the issues from several perspectives and capturing the interviews and issues on video.

HERS co-director contributes to curriculum development

Dan Wildcat, HERS co-director and HINU instructor, contributed to the environmental technology curriculum being developed by KSU's College of Technology in Salina, Kan. Wildcat wrote components that discussed the European and native views on nature and the cultural and archeological resources discovered on public or private land. The curriculum development project is funded by the Department of Defense.

Interconnectedness main theme in spring video series

Production of the NAOMI Spring Seminar Series, *All Things Are Connected: The Sacred Circle of Life*, is ready to begin this fall.

The four-part satellite and video series will introduce real issues Indian nations are addressing through the efforts of their own environmental agencies, offices, and professionals, surrounding

the themes of land, air, water, and living beings. Each program will identify challenges, solutions, and required resources that deal with the theme featured in the seminar program.

The first program will be a satellite uplink tentatively scheduled to air in mid-January. The second and third programs will be filmed for videotape distribution in February and March. The series will conclude with a second uplink scheduled for April.

Search for R2D2 program funding through DoD, partnerships, and jobs continues

Efforts continue to identify third-year funds for the R2D2 program. Opportunities may exist to serve as an official partner for research and technology transfer with DoD organizations, regulators, local communities, private industry, and international organizations involved with DoD environmental issues. Our TOSC and NAOMI programs may be an integral part of these activities.

Regardless of results of efforts to secure additional funding, the center director intends for all HSRC researchers, staff, and programs to make every attempt to support R2D2 students through the duration of their degree programs.

As reported in the January issue of *HazTech Transfer*, current priority is on completing existing research projects and on job placement activities. Research results and a pool of knowledgeable students are key to establishing new partnerships.

The R2D2 student resume portfolio on our World Wide Web site illustrates this point. In addition to information on R2D2 students about to enter the work force, this portfolio includes information on the other R2D2 students in the program. The Internet address for this portfolio is:

<http://www.engg.ksu.edu/HSRC/R2D2/Resume.Students.html>

Potential employers and HSRC partners, especially those who are stakeholders in DoD affairs, are encouraged to visit this and other (linked) R2D2/HSRC Web sites.

Journal of Hazardous Substance Research calls for papers

Team receives NSF grant

continued from page 1
innovative, integrated approaches to clean up soil and water and restore contaminated sites. A number of postdoctoral research associates and graduate students, including R2D2 program student Ellie Bier, are associated with the project.

The group intends to build a new research and education program in remediation and environmental restoration at the University of Nebraska, complementing strong university programs already in place in the Water Center/Environmental Programs, the Center for Biotechnology, and environmental toxicology at the Eppley Institute of the University of Nebraska Medical Center.

The new NSF project focuses on organonitrogen contaminants in soil-water systems, specifically nitroaromatics (nitrotoluenes) and heterocyclic nitramines (triazines). Much of this work centers on remediating soil at the former Nebraska Ordnance Plant in Mead, Neb., which is highly contaminated with munitions compounds (mainly TNT and RDX), and cleanup of atrazine and other nitrogenous pesticides in soil and water.

Researchers are taking an integrated approach to remediation, recognizing the diversity of contamination in situ and that technologies resulting from interdisciplinary research are needed to achieve environmental goals. Their goal is to increase the understanding of processes governing environmental fate and toxicity of these contaminants, and provide information that can be used to develop cost-effective and environmentally sound remediation strategies for contaminated soil and water.

Remediation technologies currently under study include (i) abiotic oxidation promoted by metals and peroxide, (ii) chemical reduction by zero-valent metals,

(iii) sequential abiotic reduction-oxidation, and (iv) combined abiotic-biotic (plant-based and microbial) processes. Microelectrode and microslicing techniques are being used to quantify the effects of microenvironment oxygen, redox, and pH on xenobiotic transformations and fate. Research will determine the potential to use plants, plant-rhizosphere, and microbial systems to remediate marginally contaminated soil and complete the remediation process following abiotic treatment.

Research results will provide technologies that can be transferred to industry and used to remediate and restore contaminated sites.

The group began its work with a small grant from the U.S. Army Cold Regions Research and Engineering Laboratory (CRREL) at Hanover, N.H., and received its first significant funding from this HSRC in 1994 (Project 92-94, "Fate and Transport of Munitions Residues in Contaminated Soils").

Pat Shea, lead PI for the NSF/EPSCoR project, said, "The Great Plains/Rocky Mountain HSRC has been a key to the success of our group."

Steve Comfort added, "Without HSRC support, it is unlikely that our group would be where we are today."

Funding of "Simultaneous Transformation of Atrazine and Nitrate in Contaminated Water, Sediment and Soil by Zero-Valent Iron-Promoted Processes" (Zhang, Shea and Comfort), this year's number two-ranked Great Plains/Rocky Mountain HSRC proposal, will complement the NSF project. In addition, NSF/EPSCoR co-PIs Comfort, Zhang, Drijber, and Horst have recently received grants from the National Water Research Institute, NRI Competitive Grants Program, and industry for related projects.

Consortium Directory

Our World Wide Web address is:
<http://www.engg.ksu.edu/HSRC/home.html>

Key personnel at each university are:

Kansas State University
Larry Erickson, 913-532-4313/2380*
Dick Hayter, 913-532-6026**
Stan Grant, 913-532-7495
J. Patrick McDonald, 913-532-7496
Diana Tillison, 316-686-9274
Carla Wolfe, 913-532-7464
Rita McDonald, 913-532-6519
Alison Hodges, 913-532-6027
Blase Leven, 913-532-0780
FAX: 913-532-5985

Haskell Indian Nations Univ.
George Godfrey, 913-749-8428 * **

Lincoln University
Mary Wyatt, 314-681-5173 * **

Montana State University
Al Cunningham, 406-994-6109* **

South Dakota State University
Vern Schaefer, 605-688-6307* **

University of Iowa
Jerry L. Schnoor, 319-335-5646*
Burt C. Kross, 319-335-4423**

University of Missouri-Columbia
Shankha K. Banerji, 314-882-3610*
Richard Potter, 314-882-3469**

University of Missouri-Rolla
Tom J. O'Keefe, 314-341-4358*
Allen W. Hatheway, 314-341-4777**

University of Montana
Jerry J. Bromenshenk, 406-243-5648*
Chris Heyer, 406-243-7876**

Montana Tech
Karl Burgher, 406-496-4410* **

University of Nebraska-Lincoln
Pat Shea, 402-472-1533*
Larry Hammer, 402-472-2844**

University of Utah
Sam Ghosh, 801-581-6931*

Utah State University
Ron Sims, 801-797-6069*
Ryan Dupont, 801-797-3227**

University of Wyoming
George Vance, 307-766-2297 *
Roger Wilmot, 307-766-5353 **

*—research
**—technology transfer



Editor

Mary Rankin

Technical Writer

J. Patrick McDonald

Production Manager

Mike Dorcey

Graphics and Design

Rich Gardner

HazTech Transfer is published quarterly by the Great Plains/Rocky Mountain Hazardous Substance Research Center, Regions 7 & 8, at Kansas State University, Manhattan, KS 66506, to serve as a means of communication and a forum for members of the center's consortium partners and researchers and the public. The Office of Research and Development, USEPA, under agreement R-819653, provides 70 percent of the funding for this program and this publication. The content of this publication does not necessarily represent the views of that agency.

Although the projects described in this article have been funded in part by the U.S. Environmental Protection Agency under assistance agreement R-819653, through the Great Plains-Rocky Mountain Hazardous Substance Research Center, it has not been subjected to the agency's peer and administrative review and, therefore, may not reflect the views of the agency. No official endorsement should be inferred.

HSRC researchers assist Lithuanian scientists

By J. Patrick McDonald

As part of a longer-term environmental monitoring technical assistance program in Lithuania, sponsored by the U.S. Environmental Protection Agency, HSRC researchers from Montana State University traveled to Lithuania and subsequently hosted Lithuanian scientists in Montana. U.S. scientists hoped to obtain environmental chemistry information from Lithuania that may be used by modelers for ecological risk assessment while at the same time providing technical assistance and training to Lithuanian scientists.

Dr. Robert V. Thurston and John F. Neuman, a research chemist, visited Lithuania on March 12-22, 1995. They provided technical assistance and training at Vilnius University on chemical analytical methods, and in HPLC instrument repair and modification. Presentations were also given at the Lithuanian Institute of Ecology on aquatic toxicology and methods. In addition, eight refurbished 8088 and 80286 PCs were taken to Lithuania and installed as the first equipment to start a data processing instructional classroom within the Faculty of Ecology of the University.

Jurga Motiehunaitė, a lichenologist from the Lithuanian Institute of Botany, and Gintaras Svecevičius, a fisheries physiologist from the Lithuanian Institute of Ecology, stayed at MSU March 30-April 26. Both Lithuanian scientists are studying the impact of heavy metals in their respective disciplines but neither had appropriate instrumentation or analytical training. During their visit to MSU, the scientists received hands-on training to operate a Varian 1100 atomic absorption spectrograph (AAS). The training also included instruction in theory, and samples of lichens and fish tissues (some of which were brought from Lithuania) were prepared and analyzed for metal content. The training also included practice of methods for quality assurance and control.

The next phase of the project will send MSU scientists back to Lithuania for additional analytical training. They hope to bring the AAS and additional PCs. This phase is currently seeking funding.

Research results

Detailed results were published in the technical report *Environmental Studies in the Nemunas River Basin, Lithuania* (referenced below). The report contains 17 papers from 56 scientists. The research covers five technical areas:

Identification of organic and inorganic chemical pollutants and monitoring of chemical and biological parameters in Lithuanian surface and ground waters.

Ecological and water quality modeling, including evaluation of assumptions for modeling fate and effects of pollutants.

Measurement of transformation and equilibrium constants for predicting fate of pollutants.

Investigation of microbiological transformation processes.

Toxicity testing of identified pollutants in biological species indigenous to the Baltic Republics.

Applications

Aside from the enhanced international cooperation and benefit of improvement of analytical methods employed in Lithuania, the project resulted in an inventory of industrial and municipal chemical wastes (mostly heavy metals and xenobiotics) that are being discharged into the environment of Lithuania, neighboring Baltic Republics, and the Baltic Sea. The inventory is expanding to include a former Soviet air base. The wastes being inventoried in the municipal, industrial, agricultural, and military sites are believed to be representative of wastes discharged at other sites in the former Soviet Union. These reports will provide necessary information for remedial cleanup formulation as there is little other data on environmental chemistry for this geographic region.

The project has also resulted in experience in providing technical training to non-native English speakers and scientists trained outside the U.S. This experience should prove valuable in other international outreach efforts undertaken by the HSRC.

Principal investigator

Robert V. Thurston, research professor, Fisheries

continued on page 5



This map shows Lithuania's Baltic location.

HSRC site receives three-star rating from Magellan

The Magellan Internet Guide recently gave the HSRC Web site a three- out of four-star rating. The site contains information about the HSRC program, including a large number of project abstracts from the individual centers. The site can be found by pointing your Web browser to:

<http://eoeml-www.gtri.gatech.edu/home/hsrc/>

Two new places have recently been put into Web space. The *Journal of Hazardous Substance Research* is now accepting manuscripts. Details can be found at:

<http://www.engg.ksu.edu/HSRC/JHSR/>

And a place for phytoremediation researchers has also been established. If you have info on phytoremediation you'd like to share with researchers in the area, click on over to:

<http://www.engg.ksu.edu/HSRC/phytorem/>

Every day new resources of interest to environ-

mental researchers, regulators, and project managers are being added to the Internet. Occasionally we'll highlight Web sites that we think are particularly valuable to our researchers. If you know of a site that deserves attention, e-mail the URL to hsrc@engg.ksu.edu.

Below are more WWW sites that might be of use.

Come environmentally cybersurfing!

Envirogate (Environmental Technology Gateway)

<http://iridium.nttc.edu/environmental.html>

Envirogate contains news, programs, technologies, and resources.

SAGE--Solvent Alternatives Guide (U.S. EPA)

<http://clean.rti.org/>

Provides information on solvent and process alternatives for parts cleaning. Includes a listing of existing and new cleaning technologies, ideas for minimizing waste, listing of state technical assistance providers, and a process conversion checklist.

National Pollution Prevention Center for Higher Education (NPPC)

<http://www.umich.edu/~nppcpub/nppc.html>

NPPC collects, develops, and disseminates educational materials on pollution prevention. The target audience is primarily academia.

Lithuanian scientists

continued from page 4

Bioassay Laboratory, Montana State University, Bozeman, Montana 59717

Publications

Thurston, R.V. (Ed.) 1994. Environmental Studies in the Nemunas River Basin, Lithuania. Office of Research and Development, U.S. Environmental Protection Agency, Athens, Georgia. EPA/600/R-94/155. September 1994.

New electronic journal seeks papers

continued from page 2

Scope

The editors will consider for publication original articles and reviews that deal with all aspects of hazardous substance research.

These include remediation of contaminated soil, sediments and ground water, stabilization and reclamation of mine lands, hazardous substance management, pollution prevention, environmental fate and transport, risk management, site assessment, analytical methods, innovative technologies, toxicology, ecotoxicology, geochemistry, hydrogeology, transformation processes, separation processes, and agricultural chemical management.

Basic and applied manuscripts which include new theory, models, methods, and/or experimental results will be considered.

Submission

Papers should be submitted to:

Larry E. Erickson
GP/RM HSRC
Kansas State University
101 Ward Hall
Manhattan, KS 66506

Complete submission guidelines are available on the Internet at:

www.engg.ksu.edu/HSRC/JHSR/guidlns.html

Subscription rates

Institutional subscription: \$250/year

Personal subscription: \$25/year

Subscribers may print copies of papers for their use without paying a copying charge. Institutional subscribers may make archival copies and multiple copies of the same article without paying the copying charge in order to serve the needs of individuals employed by the organization. Subscribers will receive a monthly listing of new papers via electronic mail.

Karl Burgher serves dual role in HSRC

By Mary Rankin

Karl E. Burgher, professor and project manager for the Mine Waste Technology Program (MWTP) activities at Montana Tech of the University of Montana, has a dual role in HSRC-related programs. He is a project manager for the Technical Outreach Services for Communities (TOSC) program, and also serves as vice-chair for the Haskell Environmental Research Studies (HERS) Center at Haskell Indian Nations University (HINU).

His background in engineering, economics, and finance, Burgher said, helps him to communicate the concepts of risk to engineers, scientists, and the public. In his TOSC role, he has taught an eight-week public course on "Risk and the Environment."

As vice-chair of HERS at HINU, Burgher helped establish the tape seminar series, "Mine Operations, Design, and Closure '95 and '96." This event was co-sponsored by MWTP, EPA, DOE, and several other departmental offices and mining companies. He has worked with tribal officials of the Gros Ventre and Assiniboine, attended a sun dance, worked with the Navajos on an environmental training project, and has been involved with helping to plan the College of the Environment at HINU.

"My work at Haskell has allowed me to better understand the Native American people," Burgher said. "I can teach about mining issues. I feel I am a source of information."

Burgher said he became an engineer because he knew he lived in an increasingly technical world. But his passion has always been business and economics. So, after completing a B.S. and M.S. in mining engineering from Michigan Technological University, in 1980 and 1982, respectively, he then earned a B.S. in economics from the University of Missouri-Rolla in 1984, before completing his Ph.D. there in mining engineering in 1985, specializing in mathematical economics. "To work really effectively today, one must understand technology and money," is Burgher's belief.

"Engineering and technology simply exist. The exciting part is in making the choices of how to proceed, where to go, and if they should be a part of society."



Karl Burgher

His favorite areas of his work are project management and bringing people with different points of view to the same table to find compromise. Another area of great appeal is graduate student advising. "I really enjoy helping graduate students make choices about their career paths," he said, "helping others find what they will like to do for the next 30-40 years."

Burgher's heroes are the "dreamers who did what others said could not be done." As a case in point, he described a team of four Russians residing at Montana Tech working on cleaning up the Berkeley Pit in Butte. It took them two years work on the project just to get to the point where they arrived in Montana. "Engineering and technology," Burgher said, "simply exist. The exciting part is in making the choices of how to proceed, where to go, and if they should be a part of society."

Family life, playing basketball, fly fishing, and building Chevy muscle cars are activities that occupy Burgher's spare time. He and his wife Kathleen have been married for 15 years and have four daughters—Kristina, Laura, Jaqueline, and Madeline. As for the cars, he is currently finishing a '74 El Camino and starting on a '79 Corvette. "I got the 'Vette," he explained, "because we have no day-time speed limit in Montana. I love to fly on the highways we have out West!"

Tenth conference proceedings nearing completion

Proceedings of the 1996 HSRC/WERC Joint Conference on the Environment have been desktop published and final proof copies of the manuscripts sent to contributing authors. We anticipate printing

and mailing to be accomplished later this fall.

For those who have not yet ordered the 1996 publication, or who would like to have previous years' proceedings, please use the order form below.

Order form

To order copies of HSRC/WERC joint conference proceedings, complete the form below and send it to: Proceedings, HSRC, Kansas State University, 101 Ward Hall, Manhattan, KS 66506-2502.

Method of payment

- Bill my company
 Check enclosed (make payable to KSU)
 VISA
 MasterCard

Item	Price	Qty.	Subtotal
Proceedings, 1996	\$50	___	\$_____
Proceedings, 1995	\$50	___	\$_____
Proceedings, 1994	\$50	___	\$_____
Proceedings, 1993	\$50	___	\$_____
Proceedings, 1992	\$50	___	\$_____
Proceedings, 1991	\$50	___	\$_____
(photocopy)			
Proceedings, 1990	\$40	___	\$_____
Vols. I & II			
Proceedings, 1989	\$40	___	\$_____

Credit card number

Card expiration date

Card holder's signature

Send proceedings to:

Name

Company or Organization

Address

City

State

ZIP Code

Phone number

FAX number

Repository documents available through HSRC

As part of a continuing series on the holdings of the Hazardous Substance Research Center repository, following is a partial list of holdings available for checkout or interlibrary loan from Farrell Library at Kansas State University (KSU). This list is of some of the most recent acquisitions.

Floppy disk copies of the entire list of holdings are also available. To request a disk copy of the list, write to Repository List, HSRC, Kansas State University, 101 Ward Hall, Manhattan, KS 66506-2502, 913-532-6519, FAX 913-532-5985.

Rec# 1136. Watermeier, Nathan L. Impacts of Tillage System and Chemical Incorporation on Surface Losses of Water, Soil, Atrazine and Alachlor. Lincoln, NE: University of Nebraska, 1993. Thesis, 197 pp.

Rec# 1137. Bioremediation of Hazardous Wastes: Research, Development, and Field Evaluations. Washington, DC: Environmental Protection Agency, September 1995.

Rec# 1138. Don't Wait Until 1988: Spill, Overfill, and Corrosion Protection for Underground Storage Tanks. Washington, DC: Environmental Protection Agency, April 1994.

Rec# 1139. Background Paper: Cleaning Up Contaminated Wood-Treating Sites. Washington, DC: United States Congress Office of Technology Assessment, September 1995.

Rec# 1140. PCBs in Our Environment: The Legacy Continues. Manhattan, KS: Kansas State University, April 21, 1995. VHS Tape.

Rec# 1141. Topics on Pollution Prevention: Vehicle Maintenance. Manhattan, KS: Kansas State University, May 2, 1995. VHS Tape.

Rec# 1142. Poplar Buffers: I Can Do That! Iowa City, IA; Dept. of Civil and Environmental Engineering, The University of Iowa, 1995. VHS Tape.

Rec# 1144. Bajpai, Rakesh K., ed. Proceedings of the Twenty-Fifth Annual Biochemical Engineering Symposium. Columbia, MO: Dept. of Chemical Engineering, University of Missouri, September 16, 1995.

Rec# 1145. Lee, Euisang. The Fate of Polycyclic Aromatic Hydrocarbons in the Rhizosphere of Festuca Arundinacea. Manhattan, KS: Dept. of Civil Engineering, Kansas State University, 1996. Thesis, 219 pp.

Rec# 1146. Mine and Mineral Waste Containment Design Course. Whitefish, MT: Mine Waste Technology Pilot Program, Montana College of Mineral Science and Technology, April 10, 1995. 6 VHS Tapes.

Calendar

Oct. 9 — Project Designer Refresher, Overland Park, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Oct. 10 — Contractor/Supervisor Refresher, Overland Park, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Oct. 11 — Inspector/Management Planner Refresher, Overland Park, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Oct. 14-16 — Lead Inspector Training, Kansas City, KS; Mid-States Rocky Mountain Regional Lead Training Center, Barbara Miles, 913-897-8524.

Oct. 17-18 — Lead-Based Paint Risk Assessment, Kansas City, KS; Mid-States Rocky Mountain Regional Lead Training Center, Barbara Miles, 913-897-8524.

Oct. 24 — ISO 14000 International Standards for the Environment Satellite Conference; Univ. of Mo.-Columbia, Joanne Heisler, 573-882-2854.

Nov. 1 — Inspector/Management Planner Refresher, Kansas City, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Nov. 8 — HAZWOPER Refresher, Kansas City, KS; Center for Environmental Education and Training, Shirley Welhoelter, 913-897-8527.

Nov. 12-24 — Certified Hazardous Materials Manager Review, Kansas

City, KS; Center for Environmental Education and Training, Shirley Welhoelter, 913-897-8527.

Nov. 15 — Certified Hazardous Materials Manager Exam, Kansas City, KS; Center for Environmental Education and Training, Shirley Welhoelter, 913-897-8527.

Nov. 18-22 — Lead Abatement Training for Supervisors and Contractors, Kansas City, KS; Mid-States Rocky Mountain Regional Lead Training Center, Barbara Miles, 913-897-8524.

Nov. 20 — Project Designer Refresher, Kansas City, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Nov. 21 — Contractor/Supervisor Refresher, Kansas City, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Nov. 22 — Inspector/Management Planner Refresher, Kansas City, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Dec. 2-6 — Hazardous Waste Site Operations Training, Kansas City, KS; Center for Environmental Education and Training, Shirley Welhoelter, 913-897-8527.

Dec. 9-11 — Hazardous Materials Emergency Response, Kansas City, KS; Center for Environmental Education and Training, Shirley Welhoelter, 913-897-8527.

Dec. 13 — HAZWOPER Refresher, Kansas City, KS; Center for Environmental Education and Training, Shirley Welhoelter, 913-897-8527.

Jan. 10 — Inspector/Management Planner Refresher, Kansas City, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Jan. 22 — Lead Inspector Refresher Training, Kansas City, KS; Mid-States Rocky Mountain Regional Lead Training Center, Barbara Miles, 913-897-8524.

Jan. 23 — Lead Supervisor/Contractor Refresher, Kansas City, KS; Mid-States Rocky Mountain Regional Lead Training Center, Barbara Miles, 913-897-8524.

Jan. 29 — Project Designer Refresher, Kansas City, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Jan. 30 — Contractor/Supervisor Refresher, Kansas City, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Jan. 31 — Inspector/Management Planner Refresher, Kansas City, KS; National Asbestos Training Center, Barbara Miles, 913-897-8549.

Feb. 21 — HAZWOPER Refresher, Kansas City, KS; Center for Environmental Education and Training, Shirley Welhoelter, 913-897-8527.

HazTech

T R A N S F E R

Great Plains/Rocky Mountain Hazardous Substance Research Center
101 Ward Hall, Kansas State University
Manhattan, KS 66506-2502



Nonprofit Organization
U.S. Postage Paid
Permit #525
Manhattan, KS 66502