

**GREAT PLAINS/ROCKY MOUNTAIN
HAZARDOUS SUBSTANCE RESEARCH CENTER**
(U.S. EPA REGIONS 7 & 8)
Kansas State University, Manhattan, Kansas

REQUEST FOR PROPOSALS

**TRAINING & TECHNOLOGY TRANSFER
(May 2000 - May 2001 Funding Cycle)**

Proposals Due September 15, 1999

General Background

The five university-based Hazardous Hazardous Substance Research Centers (HSRCs), established by the U.S. EPA, form an integrated national program of fundamental and applied environmental research, technology transfer, and training. The Great Plains/Rocky Mountain HSRC serves the 10-state area of Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming, which make up EPA Regions 7 and 8. Fourteen universities are members of the center consortium. They include, in addition to Kansas State University, Colorado State University, Montana State University, South Dakota State University, the University of Iowa, University of Missouri-Columbia, the University of Montana, Montana Tech of the University of Montana, the University of Nebraska-Lincoln, the University of Northern Iowa, the University of Utah, Utah State University, Haskell Indian Nations University, Lincoln University, and the University of Wyoming.

In October 1997, the Great Plains/Rocky Mountain HSRC received an assistance agreement for a period of three additional years. Because the center may not receive federal funds after October 2000, the advisory committees have recommended that this Request for Proposals be for work to bring center research to closure rather than starting new projects that are unrelated to past activities. Projects should be directed toward pilot-scale work, field applications, and other efforts needed to bring closure to ongoing and prior research topics. Proposed projects should be for a one-year period or less, with a starting date of May 18, 2000.

Up to 20 percent of EPA funds provided to the center may, at the discretion of the center director, be used to fund training and technology transfer projects. Management and administration of training and technology transfer activities at the center must also come from that allocated amount. While some of the funding for FY 2000-2001 may be used for continuation of projects started in previous years, new projects will be funded as new resources are available. The center may send copies of proposals to other federal agencies, which may provide partial support..

There is a need for principal investigators to prepare "State of the Science" manuscripts which provide a clear picture of applications and limitations of innovative technology that has been developed. Those who work as consultants and regulators need simple and clear design methods, monitoring techniques, and documented performance data. Technology transfer workshops to communicate this information are also appropriate as part of the effort to bring good science into decision making.

The center seeks proposals which will support and enhance the regional mission of the HSRC. Proposals for local or single-state training activities are not encouraged. Proposals that will benefit a wide audience of users and involve multi-institution and/or minority participation are encouraged.

Under EPA guidelines, up to 10 percent of the funds which support the center may be used to fund projects at non-consortium public institutions. Proposals from public universities within Regions 7 and 8, but not members of the consortium, will be considered under the "outside contractor program" described on page 8 of the EPA Solicitation for Hazardous Substance Research Centers (Ref. 1).

Training & Technology Transfer Needs

The primary mission of the center is to conduct hazardous substance research to support risk reduction in agriculture (including forestry), mining, mineral processing, and other industries in the 10-state region. Because of the importance of water resources in Regions 7 and 8, much of the research of the center is focused on soil and processes to clean up contaminated soil. The primary emphasis of technology transfer at the center is to disseminate the results of completed research and to accelerate the adoption of that technology by users. Target audiences include, but are not limited to, engineers and scientists involved in the development of technology and end-users of the technology whether generators, consumers, managers of hazardous substances, or those who mitigate the effects of improperly managed substances. Accurately informing the public about hazardous substances and related environmental issues is also a part of this process. The definition of hazardous substances is the standard definition published in many EPA documents including the Solicitation (Ref. 1.)

The center is interested in proposals that emphasize transfer of technology related to its research mission and center-generated technologies in particular. The center's research interests include the following:

Soil and water contamination by heavy metals such as arsenic, cadmium, chromium, copper, lead, and zinc associated with mining wastes and other industrial activities. Mine tailings from past mining operations have resulted in contaminated surface and groundwater. Selenium and radionuclides are also of interest at some mining and federal facilities, respectively.

Soil and groundwater contamination by organic chemicals from a variety of sources. Wood preservatives including pentachlorophenol and creosote, polynuclear aromatic hydrocarbons, carbon tetrachloride, trichloroethylene, vinyl chloride, and other chlorinated aliphatic hydrocarbons, polychlorinated biphenyls (PCB's), and dioxin have been identified as priority substances contaminating groundwater. Numerous pesticides have been identified to be hazardous substances; the fate and transport of pesticides are of particular interest because of the agricultural orientation of Regions 7 and 8. A general need continues to exist for research to develop new treatment technologies to clean contaminated soil.

Development of improved technologies and methods for characterization and analysis of contaminated soil. Simple, inexpensive methods are desired, as are innovative technologies, including real-time and non-intrusive evaluation and characterization of hazardous waste sites. This may include technologies to predict, monitor, and evaluate long-term conditions of sites under various risk reduction scenarios.

Development of innovative treatment technologies for remediation of contaminated soil and groundwater and for rendering wastes non-hazardous. Technologies that will lead to an *in situ* resolution of the problem will be emphasized.

Development of waste minimization and pollution prevention methods and technologies. The highest priority in this category is assigned to front-end pollution prevention, as well as application of these methods to site characterization and remediation processes.

We recognize that there are other environmental technological needs in the Great Plains and Rocky Mountain regions. Proposals will be considered that appropriately address these needs.

Preparation Guidelines and Recommended Outline for Proposals

Each proposal must include and fully describe the following:

1. The technology to be transferred (or deployed). For training projects, explain how this project will meet a unique need for this subject area. Describe any companion courses that exist or that are proposed.
2. The technical need that exists in the region pair which will be addressed by the project.
3. The target audience for the project.
4. The method of advertising the availability of the technology or training program.
5. How the project will accelerate the adoption of the related technology.

6. The geographic area which the project will serve (projects which serve the entire region pair or the nation will be given priority).
7. The mechanism(s) to be used in transferring (deploying) the technology (collaborative field implementation/ treatability studies, live seminar, print and/or electronic media, industrial partnerships, on-site demonstrations, etc.).
8. The method by which the success of the project will be evaluated. For training proposals, include an evaluation procedure and a sample instrument.
9. The approximate date(s) for delivery of the project elements.
10. A proposed schedule of milestones and tasks leading to deliverables of the project.
11. The qualifications and experience of the particular institution (department, college, university) in conducting technology deployment programs and experience related to the hazardous substance technology being addressed by the proposal.
12. The qualifications of the individuals presenting the proposal and their experience in delivering other technology transfer programs or training activities.
13. The technical resources that will be available to the target audience following delivery of the training program should participants need additional information.
14. A complete budget for the proposal which follows the milestones and deliverables. The budget must reflect the funding match requirement of one non-federal dollar for each four dollars of federal funds.

Recommended outline for proposals:

1. Cover Page: Include proposal title, name, title, address, phone and FAX number, and e-mail address of principal investigator(s) (PI), signature of PI(s), and other signatures required by submitting organization, and date of submission.
2. Executive Summary: One to two pages in length including the title of the proposal, name, title, phone and FAX number of the principal investigator(s), project duration, description and goals of the project, and summary budget requested.
3. Body: Respond to each of the 14 points previously described in this request for proposals.
4. Budget: Provide a detailed budget for of the project including assigned time in tenths of total time for a specific time period, and cost for each participant. (Example: J. Jones, 0.2 time for 9.0 calendar months.) Include in the budget justification for any anticipated equipment purchases and proposed travel including destination and purpose. A typical budget page format is attached. Please use it as a guide as you prepare the budget for your proposal.
5. Resumes: Provide two- or three-page resumes of the PI(s) and key staff.

The proposal should contain a brief (one- to two-page) executive summary. The body of the proposal, exclusive of the cover page, table of contents, executive summary, budget page(s) and two- to three-page resumes of the principal investigators, should not exceed ten (10) double-spaced, 8-1/2 by 11 inch pages. The font should be a clearly readable style of 10 to 12 points, or 10 to 15 characters to the inch.

Evaluation Criteria

The Training & Technology Transfer Advisory Committee, composed of qualified representatives of industry, academia, and federal agencies, will review, evaluate, and rank the proposals. Proposals will be evaluated based on merit and responsiveness to the points described above, and ranked accordingly. Additional consideration will be given to the following:

- (a) The merit of the proposal and its contribution to the mission of the center.
- (b) The proposal can be shown to make a substantial contribution to advancing research from the laboratory to an environmental application related to hazardous substances, or will provide a training and/or information program which will result in increased public or professional understanding of hazardous substances, and/or the laws, rules, and regulations governing them.
- (c) The proposal is professionally written, clear, and understandable.
- (d) The proposed budget fits the requirements of the project and will provide sufficient resources to achieve the anticipated outcome of the proposal.
- (e) The proposal and the budget are prepared to permit staged achievement of milestones and goals in case only partial funding can be provided, even in the first project year.
- (f) Proposals involving field sites with potential hazardous substance exposure must ensure that the principal investigator, and any other persons involved with the project, will have current HAZWOPER training and proof thereof, prior to commencement of work or entry upon such a site. A university approved safety plan must be prepared for on-site operations.**

While the center's contribution for new technology transfer projects will depend on the availability of funds, the committee may choose to award only partial funding. Recent awards have been in the range of \$10,000 to \$50,000 per project year. Matching funds, in addition to the required minimum, provided by the institutions receiving center support, significantly increase the total scope of each project. Projects are reviewed twice annually, at the discretion of the Advisory Committee, to evaluate successful completion of milestones and for quality of the project elements.

Submission of Proposals

Submit 15 copies of the complete proposal, one with original signatures of the collaborator(s), the principal investigator, and an official authorized to sign for the institution, to Blase A. Leven, Program Manager, GP/RM HSRC, Ward Hall 101, Kansas State University, Manhattan, KS 66506-2502. Deadline for receipt of proposals is September 15, 1999. Announcement of approved proposals will be about December 30, 1998. The anticipated starting date is May 18, 2000, for new projects.

In the interest of good environmental practice, we urge the use of recycled paper and double-sided copy for the proposal pages.

Matching Requirements

The minimum matching requirement is \$25 of non-federal funds for each \$100 of federal HSRC funds requested. Additional match by the institution beyond this minimum is encouraged and is preferred. To date, more than 40 percent of the budget for the center has been provided through matching resources.

Reference (Ref. 1)

Solicitation for Hazardous Substance Research Centers, EPA/600/8-88/063, Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC 20460; Federal Register, Vol. 53, No 55, pages 9358-9367, March 22, 1988.

Further Information

Mr. Blase Leven, Program Manager, (785) 532-0780, or Ward Hall 101, Kansas State University, Manhattan, KS 66506-2502, FAX (785) 532-5985, e-mail baleven@ksu.edu. Internet address:
<http://www.engg.ksu.edu/HSRC/home.html>.

Attachment: Sample budget