Submitted By:
Mine Waste Technology Programs (MWTP)
Montana Tech of The University of Montana

Karl E. Burgher, Ph.D., P.E.
Project Manager, MWTP Programs
Director – TOSC/TAB, RMRHSRC
kburgher@mtech.edu

Kevin L. Mellott
Associate Project Manager, MWTP Programs
Project Manager, TOSC/TAB, RMRHSRC
kmellott@mtech.edu

Prepared For:
Rocky Mountain Regional Hazardous Substance Research Center (RMRHSRC)

Charles D. Shackelford, Ph.D., P.E. – Director
shackel@engr.colostate.edu

Sandra Woods, Ph.D., P.E. – Associate Director
sandra.woods@colostate.edu

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OBJECTIVE

The Brownfields issue is one of President Bush's and the Environmental Protection Agency (EPA) Administrator Christie Whitman's priorities. In his 2002 budget, President Bush proposed increasing Brownfields funding at $97.7 million for EPA\(^1\). Brownfields are defined by the EPA as “abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.”\(^1\) These Brownfields sites are often targets for clean-up and redevelopment because they typically have low to medium levels of environmental contamination (as opposed to Superfund sites which may have very high concentrations of a wide variety of contaminants). Redevelopment of Brownfields properties has also emerged as a top priority for local governments, environmentalists, industry and other stakeholders. The Brownfields boom is fueled by prospects of urban renewal, job creation, profits and environmental improvement. And, indeed, the growing number of Brownfields success stories testifies to the potential of putting America's lands back to productive, sustainable use. However, to succeed in Brownfields, a local community must juggle a complex set of factors, such as funding and financing schemes, cleanup tools and technologies, multiple levels of regulation, issues of legal liability, risk assessment, real estate, and public participation. Success in Brownfields is no easy task, despite the abundance of information on the issue.

The Technical Assistance to Brownfields for Communities (TAB) Program at Montana Tech will address Brownfields sites throughout EPA Region 8. The objective of Montana Tech’s TAB Program will be to provide technical assistance to meet the needs and desires of the community or group seeking assistance.

APPROACH, RESULTS, AND BENEFITS

Activities to provide technical assistance can take many forms, including leadership training, risk assessment, training concerning Brownfields processes and site assessment, and technical information concerning clean-up alternatives (Table 2).

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\(^1\) The source for information about President Bush’s budget was taken from the EPA Brownfields Web Site: [http://www.epa.gov/epahome/hi-brownfields.htm](http://www.epa.gov/epahome/hi-brownfields.htm)

\(^2\) The source for information about the Brownfields Program and Brownfields sites served by the Great Plains/Rocky Mountain HSRC was taken from the EPA Web Site: [http://www.epa.gov/swerosps/bf/](http://www.epa.gov/swerosps/bf/).
Table 2. Description of Potential Activities within the Rocky Mountain Regional TAB Program

<table>
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<th>Activities that have been tailored to specific community needs included the following:</th>
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Source: After EPA HSRC Solicitation

The TAB Program differs from the Technical Outreach Services for Communities Program (TOSC), yet should incorporate similar principles of involving stakeholders, meeting stakeholder needs, building trust, creating teams of individuals with a wide range of expertise, and continuous improvement. Our approach, therefore, includes the following:

- Assembling an interdisciplinary group of faculty and staff to work on TAB projects. The group of faculty and staff will vary with project needs.
- Identifying appropriate faculty and TAB staff with a wide variety of options available to the stakeholders.
- Developing an initial agreement with the specific person or group requesting assistance identifying community needs and potential outcomes.
- **Evaluation** of TAB projects will be ongoing. The initial agreement will identify mechanisms for formal evaluations.
Montana Tech, a member of The Rocky Mountain Regional Hazardous Substance Research Center (RMRHSRC), will assist Region 8 Brownfields in many ways, such as through the development of print-based materials (creation of handbooks or compilation and review of literature); face-to-face meetings, conferences, seminars, and workshops; or through use of technologies, such as the Internet including development of Web sites, Internet-based instruction, Internet conferencing, or electronic newsletters. Each of these methods will be used, as appropriate, to help communities better understand technical issues and support redevelopment of Brownfields.

Benefits of this program are many. The program will provide assistance to a variety of stakeholders. Montana Tech will involve faculty and staff from the Rocky Mountain Regional HSRC depending on community needs and faculty expertise. The effectiveness of outreach programs will be improved by incorporating a variety of face-to-face and technology-based methods to work with stakeholders. Our ultimate goal is to assist in the redevelopment of Brownfields properties by providing information and support to communities.

CONFERENCE

Attended
EPA Region 8, 9, & 10 Brownfield Conference, Salt Lake City, Utah June 3-7, 2002.
2002 EPA Community Involvement Conference, Portland, Oregon June 25-26
2002 Brownfields Conference in Charlotte, North Carolina, Nov 12-14
2003 TOSC Conference is scheduled for March 4-5 in Baltimore Maryland.

Presented
EPA Region 8, 9, & 10 Brownfield Conference
• Kevin Mellott - Crow Nation Brownfield Job Training Program
TAB PROJECTS:

Site #1) Crow Nation, Montana - Kevin Mellott

Background
A former carpet mill (Bighorn Carpet Mill) located on the Crow Tribal Reservation has been designated a Brownfield site by the EPA. The Crow Nation has received a brownfields pilot grant to perform an environmental site assessment and plan for cleanup. This work will allow the Nation to develop plans for converting the property into a productive community-based facility.

Concerns
Water Quality Issues
Coal Bed Methane Issues
Coal Mining Issues
Public Health Issues
UST Issues
Ground Water Issues
Non- Point Pollution Issues
Environmental Justice Issues

Activities
The Big Horn Carpet Mill, which has been abandoned for the past 25 years, is located near a housing development and local baseball fields in Crow Agency. The community is concerned that children that have access to this building, due to the holes in the walls, might be at risk to various hazardous exposures as well as the physical risks associated with the building. Other concerns are the possibility of hazardous material or contaminates associated with the carpet milling process moving off-site and contaminating the groundwater. The TAB Program has provided education on the possible health hazard associated the chemicals that may have been used at the carpet mill. The TAB Program has also assisted the Crow Tribal Government with the RFP process as well as reviewing the Phase I Assessment completed by Brown and Cardwell. Phase II is scheduled for completion by the summer of 2003.

Status
The Crow Nation has a large number of hazardous waste issues that can be addressed with the TAB Program. In addition, we were awarded a Brownfield Job Training Grant on December 21st, 2001. This grant has contributed significantly to our TAB activities at this location.

Expected Outcome
This work will result in creating a baseline to environmental and industrial assessment, and developing a more effective working relationship with Federal Agencies and Programs.
Work Effort
FY 2002 Quarter #4 – High
FY 2003 Quarter #1 – High
FY 2003 Quarter #2 – High - Expected
Site #2) Fort Belknap Reservation, Montana – Kevin Mellott

**Background**
The Gross Ventre and Assiniboine Tribes, referred to as the Fort Belknap Indian Community (FBIC), reside on the Fort Belknap Indian Reservation. In 1888, the reservation was established by an Act of Congress. The site for the Fort Belknap Agency as the government headquarters was informally established in 1889. The reservation is located in remote north central Montana, and is included in portions of Blaine and Phillips counties and about 40 miles from the Canadian border. The boundaries of the reservation are the Milk River to the north, the Little Rocky Mountains to the south and survey lines to the east and west.

On July 19, 2001, the U.S. EPA awarded the FBIC a Brownfields Assessment Demonstration Pilot Grant. There are currently two sites that have been designated by the U.S. Environmental Protection Agency and the Fort Belknap Community Council (FBCC) as Brownfields Assessment Pilot Sites; the Old Agency Landfill and the Snake Butte rock quarry, both of which are located wholly on tribally owned lands. The Old Agency Landfill, located 1 mile east of the Agency was in operation for approximately 60 years. During this time, the landfill reportedly accepted residential, industrial and agricultural wastes and allegedly received unspecified amounts of pesticides and PCBs. Residents, federal agencies and health facilities utilized the landfill for years since the agency was formed in the early 1900’s. It was closed in 1970. The Snake Butte rock quarry, located approximately 10 miles south of the Agency was utilized by the U.S. Army Corp of Engineers in the 1930’s for obtaining rip-rap during the construction of the Fort Peck Dam. Upon completion of the dam, the butte was left without any form of clean up. There remains evidence of blasting, railroad construction and other debris that have damaged the area.

**Concerns**
- Mining Issues
- Landfills
- Ground Water
- Environmental Justice
- Chemical Contamination
- Pollution Prevention
- Cultural Sites

**Activities**
The TAB Program has provided Brownfields Workshops to the community as well as working with the Fort Belknap Environmental Protection Program evaluating RFP associated with the Brownfields Assessment Grant.

**Status**
The TAB Program is currently assisting Sherry Bishop and Ina Nez Pierce of the Ft. Belknap Environmental Protection Program with technical review of their Brownfields Job Training Grant Proposal.
**Expected Outcomes**
This work will result in creating a baseline to environmental and industrial assessment, and developing a more effective working relationship with Federal Agencies and Programs.

**Work Effort**
FY 2002 Quarter #4 – Moderate
FY 2003 Quarter #1 – High
FY 2003 Quarter #2 – High - Expected
Site #3) Spirit Lake Reservation, Fort Totten, North Dakota - Karl Burgher & Kevin Mellott

**Background**
The Spirit Lake Sioux belong to the Sisseton-Wahpeton Sioux Band. The tribe’s ancestral grounds lie in what is now Minnesota; an 1862 discovery of gold in Minnesota enticed gold seekers and settlers through Minnesota Sioux Country, resulting in the Minnesota Uprising that same year. Following this conflict, many of the Sisseton-Wahpeton Band migrated southwest to what is now the Fort Totten, N.D., area. The reservation was established in 1867 by treaty between the United States Government and the Sisseton-Wahpeton Sioux Bands. The Candeska Cikana Community College just recently received a Brownfield Training Grant and has requested TAB Assistance

**Concerns**
Ground and Surface Water Contamination
Brownfields Issues
Hazardous Waste
Cultural Issues

**Activities**
Fort Totten and the Candeska Cikana Community College located on the Spirit Lake Reservation have contacted the TAB Program and have requested assistance with their Brownfield Job Training Grant. They need help accessing educational contractors, perhaps with some on-the-ground education by the TOSC/TAB staff, and curriculum design for the Associates Degree in Environmental Science that was promised as a leveraged event within their grant.

**Status**
This is a new site for the TAB Program; contact was made Jan, 2003. We are reviewing Job Training Grant proposal and assessing educational contractors. A trip to Fort Totten can probably be expected this spring some time.

**Expected Outcomes**
Training will take place this spring/summer and curriculum design will occur over the next calendar year.

**Work Effort**
FY 2003 Quarter #2 – Low-Moderate
Site #4) Bear Paw Development Hill County, Montana – Mark Peterson

Background
Hill County is located in north central Montana covering an area of approximately 2,896 square miles with a total population of 16,673 (or a population density of approximately 5.8 persons per square mile). The largest community within Hill County is Havre with a population of 9,621 (2000 Census), and the primary industry in the county is agriculture. Hill County also includes a portion of the Rocky Boy’s Indian Reservation and is the regional trade center for the Fort Belknap Indian Reservation. According to the 2000 census, 2,884 American Indians live in Hill County.

The Burlington Northern-Santa Fe Railway maintenance shop is located in Havre along with a diesel refueling stop for all trains traveling Montana’s northern line. A total of approximately 35 trains per day travel through Havre and utilize the diesel refueling station. A variety of light manufacturing plants are also located in the community as well as former gas stations, paint shops, dry cleaners, and various agricultural related businesses.

Concerns
Railroad Refueling and Maintenance Areas
Abandon USTs
Former Industrial Properties
Former Auto Body Repair and Paint Shops
Non-Point Source Pollution
Groundwater Contamination

Activities
Since this project is in the early stages, TAB’s primary goal will be to help identify potential development opportunities and provide information and support to the Havre community to better understand the technical issues through a variety of methods such as meetings and workshops to describe the Brownfield program to the general public.

Status
TAB personnel have been in contact with Kathy Bessette of the Hill County Commission. An initial site visit and evaluation of future training and workshops is expected for February or March of 2003.

Expected Outcomes
TAB will provide Havre County with the appropriate training and expertise for the potential future development of Brownfields locations within the county. TAB will meet the needs of the community by creating and providing educational materials, workshops, and/or presentations, as necessary. Overall, the public will develop an enhanced understanding of a variety of issues such as groundwater contamination from petroleum contaminated sites so that private investors will more likely consider developing local real estate.
Work Effort
FY 2002 Quarter #4 – Level of effort Low
FY 2003 Quarter #1 – Level of effort Low to Moderate
FY 2003 Quarter #2 – Level of effort Low to Moderate - Expected
MONTANA TECH TAB FACULTY & STAFF

Karl E. Burgher, Ph.D., P.E.

Education:
• Ph.D. Mining Engineering, University of Missouri-Rolla, August 1985
• B.S. Economics, University of Missouri-Rolla, May 1984, Cum Laude
• M.S. Mining Engineering, Michigan Technological University, August 1982
• B.S. Mining Engineering, Michigan Technological University, August 1980

Experience:
• Full Professor, Mining Engineering, August 1995 to present
• Project Manager, Mine Waste Technology Programs, December 1994 to present
• Director, The NewMedia Group, July 1998 to Present
• A Director, Continuing Education, Montana Tech, August 1997 to Present

Additional Experience:
• Past Vice Chair: Haskell Environmental Research Studies Center Board, Haskell Indian Nations University, Lawrence, KS
• Project Manager: Technical Outreach to Communities Program, Kansas State
• Member: Society of Mining Engineers, AIME, Society of Explosive Engineers
• Past President: Montana Section of AIME, 1990-93, Society of Mining Engineers
• Secretary/Treasurer: Rocky Mountain Chapter of the Society of Explosive Engineers

Kevin L. Mellott

Education:
• B.S. Engineering Science, Montana Tech of the University of Montana, December 1999
• Teaching Certification, UM Western Montana completion date May 2004

Experience:
• Associate Project Manger of TOSC/TAB, January 2002 to present
• Assistant Project Manager of TOSC/TAB, January 1998

Additional Experience:
• 1-Day Short Course Omaha, NE, Local Development Group, Greenway Planning, March 15, 2000
• 1-Day Short Course Kansas City, KS Corp of Engineer, Greenway Planning, March 16, 2000
• 1-Day Short Course Crow Indian Reservation, MT, Chemicals of Concern associated with the Big Horn Carpet Mill
• 1- Day Short Course Ft. Belknap Reservation, MT, Brownfields Workshop.
• 3-Day Short Course, Greenway Planning
• 3-Day Short Course, Golf Course Planning
• 15 Module Introduction to Eco-Tourism Planning
TOSC/TAB ASSOCIATES

Mark E. Peterson, EIT

Education:
• M.S. Environmental Engineering, Montana Tech of The University of Montana, May 1999.

Experience:
• Assistant Project Manager, Mine Waste Technology Program (MWTP), December 2002 to present
• Environmental Engineer Specialist, Montana Department of Environmental Quality (MDEQ), September 2000 to December 2002
• Senior Project Engineer, Environmental Science and Engineering, Inc. (ESE), 1998 to 2000
• Project Engineer, Environmental Science and Engineering, Inc. (ESE), 1993 to 1998
• Senior Staff Environmental Engineer, Environmental Science and Engineering, Inc. (ESE), 1991 to 1993
• Staff Environmental Engineer, Environmental Science and Engineering, Inc. (ESE), 1990 to 1991
• Environmental Specialist, Performance Technologies, Inc. (PTI), 1989 to 1990

Additional Experience:
• California Environmental Protection Agency Air Resources Board (CARB) and Montana Department of Environmental Quality, National Air Compliance Training Delivery Project Uniform Air Quality Training Program 200 Series, June 17 to 20, 2002.
• 40-hr and 8-hr Annual Refresher, Occupational Safety and Health Administration (OSHA) 1910.120 Hazardous Waste Operations & Emergency Response Courses, June 1989 through February 2001.

Michael Wenstrom

Education:
• B.A., Political Science and Geology – University of Oregon, May, 1963
• M.A., Political Science and Latin Am. Studies. – University of Arizona, 1966
• Coursework – McGeorge School of Law

Experience:
• USEPA, Region 8 – Environmental Justice Program 2000-2003
• USEPA, Region 8 – Superfund Program, 1998-2000
• Colorado Net, President – Legislative and Regulatory Information Services 1988-1998
• Information for Public Affairs, Founding Partner – National computer-based legislative reporting and consulting services. 1972-1986
• California State Assembly – Committee Consultant, Transportation and Environmental Affairs, 1968-1972
• Survey Research Associates of California – Director of Research, 1966-1968

Willis D. Weight, Ph.D., P.E

Education:
• Ph.D.  Geology, University of Wyoming.
• B.S.   Engineering Geology Brigham Young University.

Experience:
• Head, Hydrogeology Program at Montana Tech of the University of Montana.
• Head, Department of Geological Engineering,
• Instructor, University of Wyoming, Laramie, Intro. to Geology, (260 students); Physical Geology, (37 students)
• Mine Geologist, Kiewit Mining & Engineering Co., Sheridan, Wyoming,. Mine geologist for Big Horn Coal Co. Performed consulting mine development work, including two months overseas in the Peoples Republic of China.
• Hydrogeologist, Peter Kiewit Sons', Omaha, NE. Responsible for field and permit work for geology and hydrology of Cumberland Coal Co. and Rosebud Coal Sales Co., WY, .
• Hydrologic Field Assistant, U.S. Geological Survey, WRD, Idaho Falls, ID. under Jack Barraclough. Performed data collection from water wells, analysis of data on the migration of radio nuclides from buried nuclear waste at the Idaho National Engineering Laboratory. Assisted in pumping tests performed on a 10,360 foot deep geothermal test well INEL 1

Additional Experience:
• Registered Professional Engineer No. 10545 P.E. in State of Montana (By exam, Oct. 1992)
• Registered Professional Engineer No. 8176 P.E. in the State of Idaho (Feb, 1996).
• Engineer in Training (Passed EIT exam, April, 1991).
• C.P.R. certified and passed Red Cross First Aid Course.
• 40 hour Health and Safety Training Certification for hazardous waste activities.
• Monitoring Well Constructor's License for the State of Montana (MWC-215), since 1990.
Sally M. Bardsley

Education:
• Master of Science in Industrial Hygiene (May, 1994; high honors), Montana Tech of The University of Montana
• Bachelor of Science in Occupational Safety and Health/Applied Health Option (December, 1991; high honors), Montana Tech of The University of Montana

Experience:
• Assistant Professor/Laboratory Director, SH/IH Department Montana Tech
• Laboratory Director/Adjunct Instructor. SH/IH Department Montana Tech
• Director of Wellness Montana Tech

Additional Experience:
• Plum Creek Manufacturing, L.P. Columbia Falls, MT
• Butte Family YMCA. Butte, MT
• Independent Consulting