EnviroNews

An update on Superfund cleanup and other environmental activities at Hill Air Force Base, Utah

April/May/June 1998

New RAB facilitator looks forward to working with members

Meet Michele Straube, Hill Air Force Base's new Restoration Advisory Board facilitator.

Serving in her first role as a RAB facilitator, Straube, however, is no newcomer to the environmental field. An attorney since 1979, she has spent nearly every year working on environmental law projects. The one year she didn't spend time directly in the environmental field, she was the utility consumer advocate for the state of Alaska.

Straube participated in her first RAB meeting as a facilitator on January 29. The meeting was well attended and she presented two simple ground rules to the members; "Respect each other," and "It's O.K. to disagree." "There are a lot of technical discussions presented at these meetings and one of my goals as the facilitator is to make sure the RAB members fully understand these issues and are comfortable giving advice to the decision makers," said Straube.

An avid fan of the outdoors and one who enjoys traveling and hiking, Straube says those and other factors initially contributed to her interest for the environment. In addition to being a freelance facilitator and mediator, she also maintains a full schedule as a contributing editor to the Environmental Protection Agency Administrative Law Reporter and does environmental consulting for government and private sector companies. Having worked with federal, state, local governments, and corporations, Straube says she learned to recognize that sometimes trade-offs need to be made during cleanup decisions. "These situations may involve value judgments where disagreement often arise," said Straube. "But making sure everybody understands what the trade-offs are, is important. Value judgments on both sides should be identified and respected in decision making, where possible," she said.

"Hill RAB members seem committed and very interested in what is happening," she said. "I really look forward to working with this group. It's a continual challenge to protect the environment in an appropriate way and sometimes that involves discussions about the real guts of the issues."

Prior to coming to Utah, Straube and her family lived in Washington D.C.

In appreciation

Allan Dalpias (standing at left), director of Environmental Management and Hill AFB Restoration Advisory Board co-chair, presented Max Patterson with a plaque of appreciation during the RAB meeting in February. Patterson was the base's first community co-chair for the RAB and served in the position from April 1995 until December 1997.

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Cap beats tough competition to win top design award

The Consulting Engineers Council of Utah presented its Grand Conceptor Award to Montgomery Watson's Salt Lake City office for the design of a first-of-its-kind asphalt cap which covers a contaminated site at Hill Air Force Base known as Berman Pond. The innovative, double-layer cap protects the environment, maintains site usability and saved the base $1 million.

Considering the competition, the award for the Berman Pond cap is even more impressive. Other entries included the "2002 Winter Olympics Bobsled/Luge Track," the "E" Center, "Perry's Egyptian Theatre Restoration," and others.

> **This is something those of us at the base as well as personnel at Montgomery Watson can take pride in accomplishing**
>
> ---Bob Elliott, chief, Environmental Restoration Division

Berman Pond is an abandoned industrial wastewater collection pond at the South Gate entrance to the base that was backfilled over 20 years ago. The site contains perched water that has come into contact with contaminated sediments, including solvents, heavy metals and hydrocarbons, which have led to the groundwater contamination.

"I view this as a team award," said Bob Elliott, chief of the Restoration Division at Hill AFB. "This is something those of us at the base as well as personnel at Montgomery Watson can take pride in accomplishing."

Montgomery Watson's role involved investigating the nature and the extent of contamination, designing and installing a groundwater collection system to contain contamination. Montgomery Watson then designed the first-of-its-kind, double-layer asphalt cap that inhibits the percolation of water through contaminated material and subsequent groundwater contamination.

A partial view of the Berman Pond cap

The asphalt cap covers an eight acre area and consists of a two-inch layer of low-permeability asphalt, overlain by up to three inches of a coarse stone asphalt as a wearing surface. While exceeding regulatory requirements, this unique cap system saved Hill AFB $1 million and reduced construction time by two-thirds of that required for conventional landfill covers.

The Grand Conceptor Award (1st Place) is presented annually by the Consulting Engineers Council of Utah to the best entry in the overall Engineering Excellence Awards Competition. Judging took place in February.

The design also enabled cap thickness to be reduced from more than three feet, to less than 15 inches, while allowing flatter grades across the site. The level cap allows Hill AFB to continue use of the parking lots and access roads.

Because the cap involves a unique design, Montgomery Watson also developed an innovative, non-destructive testing program to prove the cap meets all environmental, health, and safety regulations.

EnvIr News

April/May/June 1998
Printed on Recycled Paper

EnviroNews is a quarterly publication of the Environmental Management Directorate, Hill AFB, UT, designed to keep the public informed of hazardous waste cleanup and other environmental activities at the base. Unless otherwise credited, all stories, photographs and graphics are produced by the editor.

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For the record

Comments from
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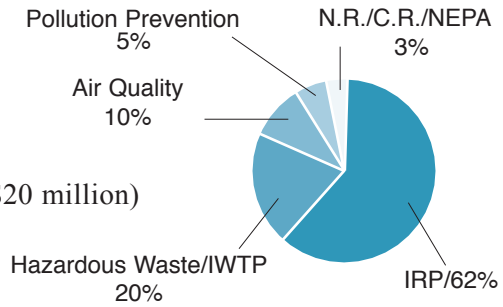
Prioritizing the cost of Cleanup

As Chief of Environmental Pollution Prevention, I look at the costs and risks managed as part of the environmental stewardship at Hill Air Force Base and its surrounding areas of responsibilities such as the Utah Test and Training Range, Little Mountain, Boulder, Wyoming, Carter Creek, Wendover, and Nevada. Ranking Environmental Management funding at Hill Air Force Base can be prioritized as follows:

Total Spent to Date

- The Installation Restoration Program /IRP (which cleans up the past sins to the environment) ($120 million)
- Industrial water treatment at the Industrial Wastewater Treatment Plant (IWTP) ($10 million)
- Hazardous Waste and Hazardous Material Management and Disposal ($30 million)
- Air Quality Management (which cleans up today's air for tomorrow) ($20 million)
- Pollution Prevention ($10 million)
- Natural Resources Management ($2 million)
- Cultural Resources Management ($2 million)
- National Environmental Protection Act (NEPA) Planning ($2 million)

The Cost of Environmental Management



Number one in dollars spent has been cleaning up the 60 hazardous waste sites discovered since 1976 to the tune of $120 million which was used for finding the sites and cleaning them up. Future costs of cleanup currently run about $13 million per year tapering down to Operational and Maintenance (O&M) costs of $3 million per year until 2050 for a grand total of $300 million. The risks we endeavor to protect include human health and the environment via the groundwater contamination of carcinogenic chemicals (those that can cause cancer in humans).

Hazardous waste management and disposal cost the center $3 million per year and is a function of workload generating the hazardous wastes. The users or generators of the wastes pay the cost of disposal. During the last ten years $30 million has been spent on managing hazardous wastes. The risks we protect are creating new hazardous waste dump sites like we did in the 1970s, which have caused our largest cleanup bill and the greatest risks.

Industrial Wastewater Treatment has cost the center about $1 million per year and for the last ten years amounts to $10 million. The risks protected are: creating the hazardous waste dump sites again, like we did in the 1970s (Berman Pond is an example).

Air Quality management started in 1993 with the Clean Air Act and has invested $20 million since then in studies and emission controls. The Air program currently runs about $2 million per year in the Environmental Management Directorate, and the product directorates spend about $60 thousand per year for O&M costs of their air emission controls. The Air Quality risks protected include smog and respiratory illnesses. We all know what it is like in Los Angeles and Mexico City from the smog.

Pollution prevention and hazardous materials management is at the front end of controlling the waste stream. Investment funding in reducing hazardous materials costs about $2 million per year with payback in reducing hazardous wastes and meeting permit requirements.

The Solid Waste Management program recycles wood, steel, cardboard, paper, etc., and makes a profit of $500,000 per year. It is the smart thing to do.

The last three programs: Natural and Cultural Resources Management and NEPA are what one thinks about when you mention the environment, like threatened and endangered

see **FOR THE RECORD,** on page 6

NOTEWORTHY ACCOMPLISHMENT

Debbie Hall, EM's Cultural Resources Manager, received the American Cultural Resources Association (ACRA) Government Award

What's on TAPP:

A new program for Restoration Advisory Board members

Technical Assistance for Public Participation (TAPP) is a new Department of Defense (DoD) program that provides a mechanism for community members of Restoration Advisory Boards (RABs) and Technical Review Committees (TRCs) to obtain technical assistance to help them understand and provide input into DoD's environmental restoration program.The final rule was published on February 2, 1998.

Basically, TAPP is a program to facilitate public participation in its environmental restoration program by providing independent technical assistance to community members of Restoration Advisory Board members. Assistance is only available after eligible members of RABs demonstrate that other sources of assistance are unavailable or unlikely to contribute to community acceptance of environmental restoration activities at the installation. Eligible projects include review of restoration documents or proposed remedial technologies, interpreting health and environmental effects, participating in relative risk evaluations, and certain types of training. Projects must be approved by the installation commander who will then have the contracting office obtain private sector provider.

TAPP may not be used as a grant or a blank check to use at the discretion of the RAB, nor is the TAPP a means for RABs to perform sampling or other functions which should be carried out by the installation.

The final rule was developed by a working group comprised of representatives of the military components and the Environmental Protection Agency.

Eligible Projects

- Document Reviews
- Technology Assessments
- Risk Assessment Review
- Health Assessments
- Certain Types of Training

TAPP AT A GLANCE

- Community members design project and aid in selection of provider
- Government purchase orders procure technical assistance
- Maximum of $25,000 year, or 1 percent of the total restoration cost, whichever is less. There is a limit, over the life of the restoration efforts, of $100,000

Ineligible Projects

- Political Activity Lobbying
- Generation of New Data
- Reopening DoD Final Decisions
- Epidemiological or Health Studies (such as blood or urine tests)
- Litigation or Underwriting Legal Action
- Community Outreach Efforts

Career Fair

Randy Galbraith, right, a management analyst in the Environmental Management Directorate, answers questions from students during the annual Career Awareness Fair at Northridge High School. Environmental Management was one of several Hill AFB organizations that took part in the program in February. Galbraith called the event a win/win opportunity for both the school and the base. "As for Environmental Management Directorate, it was a good time to explain to the students some of the things we are doing in areas such as restoration, pollution prevention and compliance," said Galbraith.

Operable Unit Updates

Affected community: South Weber **Primary contaminants of concern:** Off base: Dichloroethene (DCE), Trichloeroethene (TCE) On Base: DCE, Vinyl Chloride, Polychlorinated Biphenyls (PCBs), Benzene and Arsenic

The public comment period for the Proposed Plan ended on March 16, 1998. Responses to public comment will be issued in a responsiveness summary. A determination will be made if changes to the proposed cleanup action are needed. Ground water monitoring wells will be installed to determine if the contamination from OU1 is impacting the South Weber #2 well.

Affected community: South Weber **Primary Contaminants of concern:** Trichloroethene (TCE), Dichloroethene (DCE), Trichloroethane (TCA)

Pumping tests at the west end extraction wells indicated that capture of the western edge of the plume would not be achieved. A shallow extension of the North Interceptor Trench is planned for this area that should achieve capture. This is currently being designed and will be built this summer.

Affected community: Hill Air Force Base **Primary contaminants of concern:** Trichloroethene (TCE), Trichloroethane (TCA), Dichloroethane (DCA), Chlorobenzene, Dichlorobezene, Chromium and Cadmium

The Sodium Hydroxide Tank Site cap is currently undergoing long term monitoring. Construction of the Refueling Vehicle Maintenance Facility Soil Vapor Extraction system was completed in Sept. 1997 and is currently in operation. Preliminary results suggest the system will meet or exceed design expectations. The Berman Pond cap was selected as winner of the Grand Conceptor Award for best design. Construction of the Berman Pond low permeability asphalt cap is ongoing and is near completion.

Affected communities: South Weber and Riverdale **Primary contaminants of concern:** Trichloroethene (TCE)

Nearly 3.3 million gallons of contaminated groundwater was treated at OU4 during 1997. An upgrade to the treatment plant was completed last April. Treatment system optimization, and the writing of O&M manuals is in process. The addition of groundwater extraction trenches will be the next phase of remediation and is at the 60 percent design level. Monitoring and engineering evaluation of the contaminated groundwater plume as well as seeps and springs and will continue.

Affected communities: Sunset and Clinton **Primary contaminants of concern:** Trichloroethene (TCE), and Trichloroethane (TCA)

New groundwater monitoring wells have been installed at the aeration curtain in Sunset (east of Main street) to evaluate its performance and effectiveness. Construction of a groundwater extraction system in a vacant lot in Sunset was completed and operations began in November. Results from a pump test and field investigation at Bamberger Pond have been reviewed and may to a waiver due to the Impracticability of treating the low levels of contamination at the site.

Affected community: Riverdale **Primary contaminants of concern:** Trichloroethene (TCE), and Trichloroethane (TCA)

At the Craidgale pump and treat system, approximately 6.2 million gallons of groundwater were treated during 1997. From this water, 3 pounds of trichloreothene (TCE) was removed. The design of the on-base pump and treat system is ongoing with construction planned for this summer.

Affected community: Hill Air Force Base/may change as more data is collected. **Primary contaminants of concern:**Chromium and Cadmium in soils

Long term monitoring of the OU7 (section of Bldg. 225, former plating shop) cap is currently ongoing.

Affected communities: Layton **Primary contaminants of concern:** Trichloroethene (TCE), Trichloroethane (TCA), Dichloroethene (DCE), Tetrachloroethene (PCE), Benzene, Chlorobenzene, Hexavalent Chromium

More field work will begin over the next several weeks to try and delineate the plume. Start-up of the groundwater collection system at the South Gate will occur in May. The objective of this system is to prevent additional contamination from moving into Layton. Water will be sent to the North Davis Sewer Plant for treatment.

Affected communities: Hill Air Force Base **Primary contaminants of concern:** Chromium, Cadmium, Polychlorinated Biphenyls (PCBs), and Trichloroethane (TCA)

The OU9 Site Inspection investigation is in its final phase. We are currently sampling property adjacent to the base to determine if contamination is leaving base property by the West Gate and east of the golf course. Three polychlorinated biphenyls (PCB) sites on base will be cleaned up using soil removal this summer. Bioventing systems will also be installed at two base sites with petroleum.

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> **The total cost of environmental management at Hill AFB for the last ten years has been approximately $196 million**
>
> --Bob James
> chief, Environmental Pollution Prevention Division

species, wetlands, archaeological artifacts, historic preservation sites, and planning. These programs get the least amount of funding about $300,000 per year and for the last ten years has amounted to about $2 million for each program. They work to protect our environment for future generations. It is what environmental management is also all about, living on the earth as responsible stewards.

The total cost of environmental management at Hill AFB for the last ten years has been approximately $196 million. We have reduced the amount of hazardous wastes disposed of and treated by over 50 percent since the 1980's, and we have either upgraded and/or pulled out all the 300 plus underground storage tanks on base. In addition, we have treated the water and air such that it is safe to drink and breathe and we have protected the natural and cultural resources so we can still meet our mission requirements.

Environmental Management doesn't come cheap, but then again nothing that really matters does.

If you have any questions or need additional information regarding the Comprehensive Environmental Response Compensation, and Liability Act/Installation Restoration Program activities at Hill AFB, contact one of the people listed here.

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