

EnviroNews

Updating environmental issues and activities at Hill Air Force Base, Utah

Winter/Spring 2001

- 2 Community board advises Air Force
- 4 Are you being exposed?
- 6 Past practices responsible for current cleanup

INSIDE

Hill's cleanup documents go digital

Hill's Information Repository—a collection of documents generated during the investigation and cleanup of chemical wastes at Hill AFB—is now available for review on a computer workstation located at the Weber State University Library.

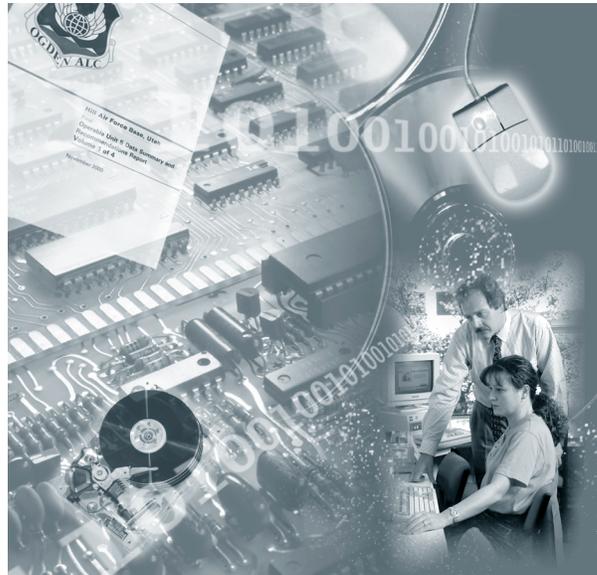
The electronic Information Repository, or eRepository, contains more than 350,000 pages of environmental documents that once filled 20 shelves at the Davis County Library's Central Branch in Layton. Those paper documents have also been moved to the library at Weber State for use by students.

The eRepository was created in response to concerns expressed by local residents. They wanted something more user-friendly that would allow them to find information quickly and easily. The new eRepository will meet those needs and more.

The eRepository will be fully indexed and searchable, a marked improvement over the shelved documents. Once users find the appropriate document, they can search for words or phrases within the document to locate specific information. The documents are also electronically bookmarked from the Table of Contents, meaning the user can jump directly to a particular portion of the document or figure by clicking on the appropriate line in the table of contents.

Users may also take information home with them. For a nominal fee (5 cents per page), users can print all or part of a document. They can also save the document to a Zip® disk or recordable compact disk (CD-R). Most of the documents are too large to fit on ordinary floppy disks.

For the first time, users will have access to the



entire Administrative Record at an off-base location. The previous Repository was only a portion of the Administrative Record (the entire collection of documents generated by the cleanup program).

"We want everyone to have access to our entire record," said Bob Elliott, chief of environmental restoration at Hill. "By putting everything on a computer, we hope to make access to this information easier for everyone."

Internet access

The eRepository will not be available in its complete form over the internet. The documents' large file size makes downloading the files for viewing or printing impractical for the average home computer user. In addition, searching and indexing would not be available over the internet.

However, Hill is planning to make executive summaries of the documents available over the internet. An executive summary is usually a couple of pages in length and gives a synopsis of the document's contents and findings. These summaries can help the user determine what specific documents are required and will make finding the correct document at Weber State much easier.

Administrative Record

The Administrative Record is the complete collection of documents used to make cleanup decisions. This includes all investigations, work plans, studies and laboratory data. Federal and state laws require the Administrative Record to be available for public review.

eRepository contents

The eRepository includes electronic versions of the entire Administrative Record. These documents are saved in Adobe's Portable Document File format, or PDF. These files are readable with Adobe Acrobat Reader, which you can download free from Adobe's web site (www.adobe.com).

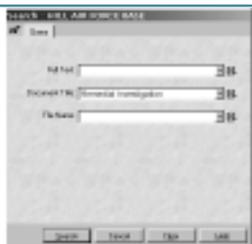
How big is big?

The eRepository is big. How big? Ten gig big. That's 10 gigabytes, or the equivalent of about 7,000 floppy disks!

Hard copy or electronic

Those accessing the documents at Weber State may print the documents on-site for a nominal fee or download the files to a disk for printing at an alternate location or at home.

From the database's search engine, you can find documents by title or by file name. You can also ask the database to show you all the documents that have a particular word or phrase using the full-text search.



RAB POC

For more information on the Restoration Advisory Board, contact the RAB Coordinator, Ms. Annie Williams at (801) 775-6898.

RAB meetings

The RAB holds quarterly meetings. The public is invited to attend the meetings. The meetings are held at the Courtyard by Marriott hotel in Layton from 7 to 9 p.m. All meetings are announced in the local newspapers and on Hill's environmental web site.

RAB member list available

While space does not allow us to publish a list of RAB members, it is available on our web site at www.em.hill.af.mil. If you don't have internet access, you may also call our RAB Coordinator for a list of RAB members.

Give 'em a call

Your RAB representatives want to hear from you. They can bring your concerns and questions to the Air Force. They can also answer many of your questions. So go ahead, give 'em a call.

RAB members needed

Hill is currently seeking community representatives from Clinton and Hill AFB. If you are interested in applying for either of these vacancies, please contact our RAB coordinator.

Board advises AF on community needs

Learning more about the Air Force's environmental cleanup program could be as simple as leaning over the fence and talking to your neighbor—especially if that neighbor is a member of the Hill AFB Restoration Advisory Board (RAB).

The Hill AFB RAB was formed six years ago and is a key part of Hill AFB's community involvement program during the base's environmental cleanup. The RAB meets at least quarterly to discuss and monitor the cleanup the Air Force is doing and provides advice to decision makers.

The RAB has 24 members and includes residents who volunteer their time. A member of the Sierra Club serves on the board, and representatives of local city governments, Weber State University, local drinking water suppliers and sewer district agencies, county health departments and the Davis & Weber Counties Canal Company are also members. The two agencies who oversee the Air Force cleanup—the U.S. Environmental Protection Agency (EPA) and the Utah Department of Environmental Quality (UDEQ)—are members of Hill's RAB, too.

The RAB helps the Air Force by providing important community input into the cleanup process, bringing the Air Force a perspective to the cleanup it would not otherwise have.

"We ask the more difficult questions of the (Hill) environmental group," said Jerry Everett, a Layton resident who also serves as co-chair of the RAB. "We play the devil's advocate role. We are ultimately part of the decision making process."

Because the Air Force is responsible for creating the environmental contamination on and around the base, it is also responsible for cleaning up that contamination. The Air Force actively seeks citizen input into the cleanup, especially through the RAB.

"The RAB's involvement is a good critical review of what we're about – a common sense, logic test for us," said Allan Dalpiaz, who represents Hill's installation commander on the RAB and serves as its co-chair. "The RAB has brought up issues; we've looked at them and it's actually changed some of our methodology. It has all been to the good and never to our detriment. It's been great."



Hill AFB environmental staff and RAB members talk with Sunset residents at a recent InfoFair. RAB members have been valuable additions to the InfoFair staff.

Everett said he became a member of the RAB almost five years ago after he saw an application form in the local newspaper seeking a community representative from Layton. "I thought it would be a great way to participate in my community without having to go through the electoral process and be a politician or a full-time city employee."

Despite his technical background as director of quality assurance for Cornerstone Nutritional Labs, Everett says he didn't know anything about drilling monitoring wells, how the depictions of the contamination on maps were created or even what trichloroethene (TCE) was until he joined the RAB and attended training sessions.

"I'm a firm believer the RAB is a good program," he said. "It's a concept that should be used for other projects like (Hill's cleanup)."

Al Herring who represents the Sierra Club on the RAB also agrees the board fills a needed role in the cleanup program. "Most organizations do not want to see Sierra Club around," he said. "It is so refreshing and positive to see Hill invite the Sierra Club to be part of their RAB. We are used to being questioners, the antagonists, instead of being invited to assist in the cleanup effort."

The Air Force wants that questioning to continue in the future, Dalpiaz said. "We want them to keep asking the hard questions," he said. "That's what we need to hear. We want our RAB members to have a good dialogue with their communities so the community can see them a resource. That would be super."

CleanUpdate

Cleanup news from the communities surrounding Hill AFB.

More field investigations underway

Hill AFB contractors have been out in force this spring conducting environmental investigations in the communities of Sunset, Clearfield, Roy and Clinton.

In Sunset, crews are working in the streets in a couple of areas: on 800 North and 870 North between Main Street and 150 West, and on 1540 North and 1425 North between 40 West and 300 West. The purpose of this work is to get groundwater samples to help define an area of groundwater contamination north of the base's West Gate. This work follows up work done last year and will likely include several permanent monitoring wells to allow long-term monitoring of the area.

Crews have also begun an investigation south of the West Gate in Clearfield. The Air Force wants to know if contamination found on base has moved off base. If contamination is found off base, the investigation will likely be expanded later this summer.

In Roy, crews are working primarily west of 2700 West between 5600 South and 6000 South. They are doing more testing to find the extent of the groundwater contamination found in Roy last summer. The Air Force plans to present the results of this summer's findings at an InfoFair this fall.

In Clinton, the Air Force is wrapping up the investigation to define the outer edges of a large area of contamination.

RAB to discuss FY 2002 budget

The next meeting of the Restoration Advisory Board will be held June 28, at 7 p.m. at the Courtyard by Marriott hotel in Layton.

The primary focus of this meeting will be to review next year's budget for Hill's environmental cleanup program. The RAB will have the opportunity to review and provide input on the projects the Air Force has planned to fund.

"We want to show the RAB how we plan to allocate the money we have been given by our headquarters," said Shane Hirschi, Hill's Remedial Project Manager.

This annual budget review is done at this time every year with the RAB.

RAB meetings are open to the public. For more information, contact Charles Freeman at 775-6951.

High School student captures science awards with AF help

When Tanner Brunsdale, a junior at Bountiful High School, wanted to come up with a good science fair project he turned to the people in Hill's Environmental Management Directorate for some ideas.

After meeting with Dr. Jon Ginn, a Hill environmental scientist, Brunsdale decided his project would involve a study on Surfactant-Enhanced Aquifer Remediation of Dense Non-Aqueous Phase Liquids (DNAPL), something Ginn has firsthand knowledge of at Hill. Brunsdale

won 1st Place-Best High School Project, Yale Science and Engineer Association-most outstanding exhibit in Computer Science, Engineering, Physics, or Chemistry, Intel Excellence in Computer Science Award, United States Air Force Jr. Division Award, Superior Project Rating, and a trip to the Intel International Science and Engineering Fair held in San Jose May 6-12.



OU-1 treatment system begins operation

After 10 months of construction and testing, Hill AFB began operating its groundwater collection system at Operable Unit 1 in March. The system is designed to capture contaminated groundwater coming from old chemical disposal pits, landfills and fire training areas on the base's northeast side. The system will capture the contaminated water before it leaves the base and pump it to base's Industrial Wastewater Treatment plant for treatment.

This collection system is part of the final cleanup plan outlined in the Record of Decision signed in 1998.

EnviroNews

EnviroNews is a quarterly publication of the Environmental Management Directorate, Hill AFB, Utah, designed to inform the public of hazardous waste cleanup and other environmental activities at Hill AFB.

Contents of EnviroNews are not necessarily the official view of, or endorsed by, the U.S. Government, the Department of Defense, the U.S. Air Force, or its contractors.

For questions, comments, or to be added to the mailing list, write to:

EnviroNews

OO-ALC/EMR

7274 Wardleigh Road

Hill AFB, UT, 84056-

5137

or call (801) 775-6951

E-mail

charles.freeman@hill.af.mil

For back issues, visit us on the world wide web:

Director of Environmental Management:
Allan Dalpias

Chief, Environmental Restoration Division:
Bob Elliott

Ogden ALC Director of Public Affairs:
Maj. Sam Hudspath

Chief, Environmental Public Affairs:
Charles Freeman



Printed on Recycled Paper

Testing the air in homes

The Air Force has taken air samples in a number of homes off base. However, no chemical vapors from the groundwater were detected in the air. The testing will continue as part of the risk assessments for Operable Units 5 and 8.

Taste and smell

If your water has a bad taste or smell, it is most likely not due chemicals from Hill AFB. Public water supplies are tested regularly for chemicals, including those in the groundwater near Hill AFB. These chemicals have never been shown to be in the drinking water supply.

Secondary water

If you irrigate with secondary water, also called Weber Water, you are not using contaminated water. Secondary water is not groundwater, but is taken from the Davis-Weber canal, which gets its water from the Weber River.

County Health Departments

Hill's Restoration Advisory Board has representatives from both the Davis and Weber-Morgan County Health Departments. In Davis County, contact Louis Cooper at (801) 451-3296, and in Weber County contact Bill Reys at (801) 399-8381.

Exposure pathways

When it comes to understanding how chemicals in the environment may affect you, there is one simple rule of thumb: you can only be affected if you're exposed.

While this may seem simple enough, it begs the question: "How do I know if I'm being exposed?" This is also the same question scientists ask when they are trying to assess the risks caused by chemicals in the environment.

These scientists (called risk assessors) are looking for what they call a *completed exposure pathway*. In simple English, this means they are looking for a way for chemicals in the soil, air, or water to reach someone.

A completed exposure pathway requires three elements: a source, a pathway and a receptor.

The receptor is the person being exposed.

The source refers to place where a chemical enters the environment.

The pathway is the way in which the chemical travels from the source to a potential receptor. Chemicals can travel through the water, air or soil. If they reach a potential receptor, they can enter the body through ingestion (eating or drinking the chemical), breathing chemical vapors or fumes, or by contact with the skin.

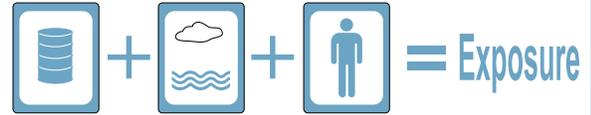
All three elements must exist for the completed exposure pathway to exist. Without just one of the elements, there is no completed exposure pathway, and therefore, no risk.

In the communities surrounding Hill AFB, these elements are all in place, but rarely do they occur together. For example, chemicals exist in the groundwater in a number of locations off base. But since the contaminated water is not used for public drinking water supplies, there is little if any chance that anyone is ingesting chemicals in the groundwater. No exposure, means no risk.

However, a few scenarios exist that could potentially result in completed exposure pathways.

■ **Breathing chemical vapors:** In some areas off base, groundwater containing low levels of chemicals could be entering basements. When this occurs, the chemicals evaporate from the water and enter the air. People breathing this air could be exposed. Once again, all three elements must be in place for an exposure to occur.

A completed exposure pathway must have all of the following:



Source

Where a chemical enters the environment.

Pathway

A way for the chemical to reach someone, i.e. soil, air or water.

Receptor

Someone coming into contact with a contaminated pathway.

If one of these elements is missing, there is no exposure.

Groundwater seeps into many basements, but only in a few isolated areas does that water contain chemicals. Without chemicals in the water, there is no source, and therefore, no exposure.

This summer, the Air Force will be testing the air in a number of homes in areas most likely to have chemical vapors in the air. The results of this study will be released to the public in October 2001. If harmful levels of chemical vapors are found, immediate steps will be taken to remove the vapors from the home.

■ **Private wells:** While not as common as they used to be, private wells are still used in some areas for irrigation. If these wells are less than 100 feet deep, it's possible they could be pumping contaminated water. As in other scenarios, not all private wells are contaminated. The Air Force has tested a number of private wells and will test yours upon request.

■ **Fruit trees:** A number of residents are concerned that fruit from trees on their property could be contaminated. While trees can suck up contaminated groundwater through their roots, the chemicals are unlikely to reach the fruit. Fruits and vegetables the Air Force has tested have shown no traces of chemicals from the groundwater in them. In response to community concerns, the Air Force has asked Utah State University to take a closer look at the potential for chemicals to enter fruits and vegetables. That study should be completed in 2002. Again, for the tree to be taking in chemicals, it must be taking in contaminated water. If it is not, then no chemicals from the groundwater could possibly be en-

Hill takes its message directly to the people

If you live west or south of Hill AFB, you may have recently been invited to or attended one of Hill's InfoFairs. And if you haven't yet had a chance to go, Hill environmental officials hope you do in the future.

For those who haven't yet been to an InfoFair, be prepared for something a little different than the kind of public meeting you may be used to attending. That's what many attendees of recent InfoFairs experienced when they walked in the doors.

Instead of the standard public meeting format—usually consisting of a podium, screen, overhead projector and one or more boring technical presentations—InfoFair attendees have the opportunity to browse a series of poster stations and talk face-to-face with representatives of the Air Force. The Air Force believes this one-on-one approach is the best way to understand and address people's concerns.

The InfoFair concept is nothing new to Hill AFB. They began holding open forums in 1994 and have held a few in different communities over the last several years.

The InfoFair takes the open forum concept a step further. With more staff, more information and more publicity, five InfoFairs held for residents of Sunset, Clinton, Layton and Roy have been very successful.

"People seem to like the format," said Bob Elliott, chief of Environmental Restoration at Hill. "Based on the feedback we have received, we think these meetings have been beneficial to the community. It gives them a chance to speak to us directly and get



Mark Loucks (right), a geologist at Hill AFB, answers questions from Sunset residents. The InfoFairs provide residents with the opportunity to speak face-to-face with Air Force officials.

immediate answers to their questions.

"I think people like the relaxed, informal atmosphere. They are able to move about at their own pace and get the information they're interested in.

"They have also been beneficial to help us understand community concerns," Elliott said. "In fact, some people have been able to provide information that has helped us in our investigations."

Attendees seemed to agree. "Everybody tried their best to answer my questions," said Sunset resident Gayle Hasler. "It was nice you addressed (the contamination) rather than covering it up."

According to Air Force estimates, more than 300 people attended the five InfoFairs recently held for people living west and south of the base.

"We've had a lot of interest from the communities, which is fantastic," Elliott said. "We want these meetings to be a resource to the public so they can get the latest information on the environmental cleanup program.

Elliott said more InfoFairs are planned in the future.

"InfoFair," for short

InfoFair is short for Information Fair. In the past, Hill has used the terms "Open House" and "Availability Session" in reference to similar forums.

Poster Stations

Instead of a formal presentation, poster stations are set up around the room. Each station focuses on a specific topic and is staffed by an expert who can talk about the topic featured at that station.

Portable posters

Each InfoFair attendee receives an information packet that includes color copies of all the posters used at the meeting. Extra copies of the packet are available to take home to neighbors who weren't able to attend.

Publicity

InfoFairs are announced in several ways. Advertisements are placed in local newspapers and sometimes the newspaper will publish an article about the upcoming InfoFair.

In addition, flyers are mailed out to every home in the affected areas announcing the InfoFair. Certainly, everyone who gets a flyer is invited to attend the meeting. But if you see an announcement in the newspaper and didn't get a flyer, you are invited, as well.



People seem to like the InfoFair's open, informal format.

Drinking water safe

Despite the groundwater contamination around the base, public drinking water supplies have not been affected by the contamination and are safe. For more information on your drinking water, contact your local city.

Superfund sites

Hill AFB, placed on the EPA's National Priorities List in 1987, is one of 1,226 Superfund sites across the country and one of 14 in Utah. Thirty-seven Air Force installations are listed as Superfund sites.

Planes, trains and automobiles

In addition to aircraft maintenance, railroad locomotives have been overhauled since the 1940s at the Tooele Army Rail Shop on the base's west side. The base also has a good-sized motorpool, where trucks, cars and other vehicles are maintained. Both sites have contributed to groundwater contamination.

Reducing the waste stream

One of the primary goals of the base's pollution prevention program is to reduce the amount of hazardous waste generated. This has been done by using materials that are less toxic or adopting processes that use non-toxic materials. Hill now generates 84 percent less hazardous waste than it did a decade ago.

Hill's contamination a result of past practices

By definition, history is a record of past events. In reality, it gives us valuable perspective into the events that shaped our present. This perspective can also help us plan our future by using the lessons learned from the past.

To get a better perspective of Hill AFB's cleanup program, it helps to understand the events that caused the contamination, what the Air Force is doing to clean it up, and what it is doing to prevent it from happening again.

The early years

Hill traces its roots to the 1920s when the Ogden Ordnance Depot was established as a location to store ammunition for the U.S. Army. In the mid-1930s the Army began looking for a location to establish an inland depot to supply a growing Army Air Corps. The Army selected a site just south of the Ogden Ordnance Depot for the new Ogden Air Depot and in 1939, the base was formally established as Hill Field.

Since its inception, Hill has been used as an aircraft maintenance facility, as well as a storage location for parts and munitions. When the United States entered World War II in 1941, Hill's role in preparing and refurbishing aircraft for war took center stage. When the war ended in 1945, the effort switched to processing planes for storage. However, aircraft maintenance activity resumed

during the Korean conflict in the early 1950s, continuing into Vietnam War in the 1960s and 1970s and continues today.

Chemical disposal

Aircraft maintenance was a messy job. Cleaning and degreasing parts, stripping and repainting aircraft and the dozens of other processes involved in aircraft maintenance, required thousands of gallons of solvents and other chemicals.

Unlike today, where the use and disposal of chemicals is closely regulated, there were few laws or procedures in place to manage the use, storage and disposal of these chemicals. As a result, waste chemicals were routinely disposed of in pits, trenches or dumped out the "back door." While such practices would be unthinkable (and against the law) today, they were the accepted procedure at the time. No one then realized the effect their actions would have on the environment. But we now know that these chemicals seeped into the ground and can eventually reach the groundwater. As a result, thousands of gallons of groundwater. In some cases, this contaminated groundwater moved off base.

Decades later, these disposal sites became the focus of a multi-million dollar environmental cleanup program. The program began in the mid-1970s, when the Air Force began looking at old disposal sites to check for contamination. Environmental investigations increased in the late-1980s. By 1990, a number of contaminated sites had been identified and contaminated groundwater was found at several locations off base.

Today, the Air Force cleanup program continues at full speed. Its purpose is to locate and define areas of contamination, determine the potential risks the contamination poses to people and the environment, and implement systems to remedy the problem. Cleanup systems, both interim and permanent, have been installed at a number of locations both on and off base. And more are to come.

But the cleanup will not happen overnight. Contamination that took decades to get into the groundwater may take at least that long to remove.



B-26 Invader and B-29 Superfortress bombers undergo maintenance at Hill in the late 1940s. These planes were just a few of the thousands of aircraft that have had maintenance work done at Hill AFB.

Oversight and public involvement

The Air Force is not taking on this effort on its own. By law, the Air Force's work is overseen by both the U.S. Environmental Protection Agency and the Utah Department of Environmental Quality. These agencies ensure the cleanup is progressing at an acceptable pace and that the cleanup protects the health of people and the environment.

The public also plays a role in the cleanup process. By law, the Air Force is required to present any cleanup plans for public review and comment. These comments are reviewed and must be addressed in any cleanup action finalized. At Hill, public involvement is encouraged. In 1995, Hill established a Restoration Advisory Board (RAB) to provide input to Air Force decision makers. The RAB consists of representatives from the local communities, city governments, environmental organizations and other interested parties. The board meets quarterly to discuss issues related to the cleanup program. (See story on page 2 for more information about the RAB.)

In addition, the Air Force has an active public involvement program, of which this newsletter is a part. Hill representatives meet periodically with the public in forums called InfoFairs, to keep people apprised of the status of the cleanup program and how the contamination may be affecting them.

Learning from past mistakes

While the cleanup program focuses on fixing past mistakes, other programs are in place at Hill to ensure they don't happen again.

"We have a very strict compliance program that emphasizes total accountability for hazardous material and hazardous waste," said Allan Dalpiaz, director of Environmental Mangement at Hill. That, teamed with an aggressive spill prevention and response program and a highly regarded pollution prevention program.



Today's maintenance procedures use more environmentally friendly products and processes. Stripping and repainting an F-16, such as the one shown here, requires much less hazardous chemicals than in the past.

"Our pollution prevention program has two main areas of focus, Dalpiaz said. "The first is to redesign and change processes to reduce the need for hazardous chemicals. The second is to use less-toxic materials for those processes, where possible.

As a result, many processes that once used chemicals have been modified to use either less-toxic or non-toxic materials. This, in turn, generates less hazardous waste.

There will always be jobs that still require the use of hazardous chemicals. The difference between yesterday and today is that today these chemicals are closely monitored and tracked to ensure they are properly used and disposed.

Dalpiaz said pollution prevention and compliance with existing laws and regulations will be the focus of the Air Force's future environmental programs.

"This is where we're going and it's what makes sense," Dalpiaz said. "We need to solve problems at their source, before they occur."



Come visit us on the web!

Find out more about Hill AFB's environmental programs by logging on to

www.em.hill.af.mil

Landfills and disposal pits

Prior to the 1970s, when environmental awareness brought about more stringent environmental laws and regulations, chemical wastes were routinely dumped into open, unlined disposal pits or landfills. This happened at Hill and at hundreds of other industrial sites across the country.

Waste disposal today

Today, chemical wastes that would have been dumped in disposal pits or landfills, are closely tracked and regulated. Wastes must be sent to a state-approved hazardous waste landfill. These facilities are designed to ensure the chemicals do not enter the environment.

Compliance checks

Hill is subject to all state and federal environmental laws and regulations. To ensure the base is adhering to these standards, Air Force inspectors conduct an annual audit of the base to identify and correct potential violations of the law.

If you have any questions, or would like more information regarding the cleanup work at Hill AFB, please contact one of the people listed here.

Hill AFB Environmental Management Directorate Remedial Project Manager:
Shane Hirschi
(801) 775-3646

Environmental Public Affairs:
Charles Freeman
(801) 775-6951

Utah Department of Environmental Quality Remedial Project Manager:
Muhammed (Mo) Slam
(801) 536-4178

Community Involvement Coordinator for UDEQ:
Dave Allison
(801) 536-4479

U.S. Environmental Protection Agency, Region 8 Remedial Project Manager:
Sandra Bourgeois
(800) 227-8917, ext. 6666

Community Involvement Coordinator for EPA:
Ellie Crandall
(800) 227-8917, ext. 6621

Official Business

Exposure (cont. from page 4)

tering the fruit.

■ **Springs and wetlands:** In some areas off base, groundwater surfaces in springs, seeps and wetland areas. In some areas, this water could be contaminated. Children playing in the water could be exposed to chemicals. However, this condition rarely occurs. In areas where there could be a risk, residents have been notified.

If risk assessors determine that completed exposure pathways do exist, they can determine the risk that chemical causes to people based on a number of factors. These include the age and health of the receptor, the toxicity and concentration of the chemical, how long and how often the receptor is exposed and the type of exposure. The resulting calculations indicate the risk for cancer or other non-cancer health effects.

Risk assessments can determine current risks as well as potential future risks. For example, what is now an empty field may someday become the site of a new residential development. The Air Force considers these factors when developing cleanup plans for a particular site.

The following questions and answers can help you determine if you may be part of a completed exposure pathway.	
Are you drinking contaminated water?	The water that is contaminated is not your drinking water. If you pay a water bill to a city or other water provider, you are not drinking contaminated water. Public water supplies are safe and are tested regularly for contaminants.
Do you get water in your basement or do you have a sump pump?	In some areas the water table is very close to the surface. Where this occurs, water can seep into basements. In a few isolated areas where the water table is close to the surface, there is also chemical contamination. When this combination occurs, it is possible that chemical vapors from the water may enter the air in your basement. In this case, there could be a completed exposure pathway.
Do you irrigate with contaminated water?	Irrigation water can come from a couple of sources, but it primarily comes from the Davis-Weber canal. It is often called "Secondary water" or "Weber Water." If you are connected to this water, you will see it annotated on your water bill. This water is not suitable for drinking, but it does not contain chemical contaminants from Hill AFB. If you use water from a private well (less than 100 feet deep) or collected spring water, you are using groundwater. In certain areas, this could contain chemicals from Hill AFB.
Do you have a spring near your home, or a place where water seeps out of the ground?	Springs and seeps are where groundwater exits the ground. In contaminated areas, this water could be contaminated. If people play in this water, they could be exposed to low levels of the chemicals. We have identified most of the springs in the area and have tested them. If they are determined to be a potential hazard, we collect and treat them.
Hill's top priority is to ensure that no one is being exposed to harmful levels of chemical contaminants from the base. If you think you may be part of a completed exposure pathway, please call Charles Freeman at 775-6951. He will arrange for someone from the base to come and discuss the issues with you personally, and if appropriate, arrange for the testing of your water or air.	