Kelly Requests Public Participation to Cleanup East Kelly AFB

The northwest corner of East Kelly Air Force Base (Zone 4) housed engine repair shops that used common cleaning fluids, paint thinners and oil products from the 1940s until the 1970s. Underground pipes conveyed liquid waste and wastewater to an industrial waste treatment facility on the main base. Over the years, this network of underground pipes leaked, contaminating soil and shallow underground water in the area. Contaminants also originated from an area on the main base across from the railroad yards where two metal plating shops were located. The affected groundwater moved off base and spread into areas south and east of East Kelly AFB.

Current information indicates, the groundwater contamination does not present a threat to public health. Kelly AFB has launched a thorough public information program regarding cleanup of East Kelly. According to Brig. Gen. Paul Bielowicz, San Antonio Air Logistics commander, informing the public about cleanup plans is as important as evaluating and cleaning up the plume. To ensure that no one is being exposed to harmful levels of contamination, Kelly AFB is asking the public to inform the base about any private wells outside base boundaries. These wells could also be helpful in evaluating the extent of groundwater contamination.

Two of the chemicals formerly used to remove grease, perchloroethene [PCE] and trichloroethene [TCE], have begun to naturally degrade (breakdown). This natural attenuation of PCE and TCE has resulted in two additional substances, dichloroethene (DCE) and vinyl chloride (VC). The presence of DCE and VC suggests a process called natural attenuation, which is the natural breakdown of these contaminants into water and ethane. Kelly AFB has developed a cleanup plan to stop or reduce the movement of contaminated shallow groundwater beyond the base boundary. The plan involves containing the shallow groundwater at the boundaries of East Kelly AFB. The containment will be in place by November 1999 and prevent additional contamination from leaving the base. The Air Force has determined the outer extent of contamination on three sides and will complete the northern extent investigation in spring 1999. The investigations showed non-detects on the east and south sides, which means no contamination could be found at the time. Other areas investigated in Zone 4 have shown contaminants either at or below regulatory levels.

If you know of a well outside the base boundary or are the owner of a well, you can reach the Kelly AFB staff by calling 925-1815 between 8:00 a.m. and 4:30 p.m.

H2O Quick Quiz

1 The Shallow Underground Aquifer lies

A. 15-25 feet under ground
B. 10-15 feet under ground
C. 1-5 feet under ground

2 San Antonio's primary drinking water source is the

A. Canyon Lake
B. Shallow Underground Aquifer
C. Edwards Aquifer

3 The Edwards Aquifer is separated from the Shallow Aquifer by approximately

A. 1500-1700 feet of clay and limestone
B. 800-1000 feet of clay and limestone
C. 500-700 feet of clay and limestone

Answers: 1.A, 2.C, 3.B

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KELLY AIR FORCE BASE, TEXAS

Environmental UPDATE

Winter 1998-1999

Contents

Federal Agency to Release Kelly Public Health Assessment

The Agency for Toxic Substances and Disease Registry (ATSDR) is scheduled to release a public health assessment (PHA) of Kelly Air Force Base in early 1999. ATSDR is the federal agency charged with protecting the public from exposure to hazardous waste sites, and its tool of choice in protecting the public is the PHA. The Agency's Division of Health Assessment sent the PHA to outside experts to ensure the correctness of the conclusions. "They wanted to make sure the conclusions are technically sound before the report was released to the public," said Laurie Ann Columbo, ATSDR/Division of Health Education and Promotion.

The PHA document will advise the public of possible past or present exposure to chemicals from Kelly Air Force Base and explain whether exposure to these chemicals could cause harm to people. The document is also used to assess current and future impacts on public health. Public health agencies may refer to it if they need to develop health advisories or other recommendations. Other agencies find the PHA useful because it names studies or actions that may be needed to evaluate and prevent adverse human health effects.

The PHA document itself is a technical evaluation of data and information on the release of hazardous substances into the environment. It is required by law for all sites listed on or proposed for the US Environmental Protection Agency National Priorities List of Hazardous Waste Sites. Sites are placed on this list based on their potential hazardous effects to public health and the environment, determined by a scoring system. Kelly AFB is not listed on the National Priorities List; however, the law also permits individuals and concerned parties to petition the ATSDR to conduct a PHA. The ATSDR PHA for Kelly AFB was initiated by the late Congressman Frank Tejeda and members of the Kelly AFB Restoration Advisory Board with the support and cooperation of the Air Force.

The PHA may be revised over time as evaluations continue. The PHA is currently being subjected to stringent peer review before being released to the general public for comment. While peer review can take from several weeks to several months, the goal of ATSDR is to deliver a public health assessment report that contains the most reliable scientific information available.

If you have concerns or questions about the Kelly PHA, please call ATSDR at 1-800-447-1544. Ask for Laurie Ann Columbo or extension 5087.

Survey Results

The 1998 Summer newsletter included a survey to determine if community members had an interest in receiving the newsletter in Spanish. Only 18 community members requested the newsletter in Spanish out of more than 18,000 newsletters mailed. We will continue to print our newsletter in English; however, Spanish language translations can be provided upon request.

Site MP Investigation Challenges Cleanup Team

Site MP receives its designation from the two metal plating shops that operated at the site from the 1940s until 1979. The two buildings were demolished in the early 1980s, and the site is now covered by a parking lot at the corner of Tinker Drive and Ordnance Road. Leaking degreaser pits and floor drains are believed to have released cleaning solvents (particularly perchloroethene [PCE] and trichloroethene [TCE]) into the ground, under the shops' foundations. Over many years, solvents leaked into the soil and shallow groundwater (15-25 feet underground), creating a contamination plume that extends approximately 3 and 1/2 miles. The drinking water source, the Edwards Aquifer, is about 1000 feet below ground and protected from this contamination by layers of impervious rock. Nevertheless, regulators require cleanup of this plume in the shallow aquifer.

Originally, scientists and engineers at Kelly believed the contamination had leaked from the Industrial Wastewater Collection System - a special sewer line that carried cleaning solvents and rinse water from various shops to an industrial wastewater treatment plant. A system of five wells was placed between the site and the base boundary in 1995 to intercept the underground water and capture it before it could carry contamination off the base. After two years of operation, the Kelly staff could see that the system was not achieving its cleanup goal. Some unknown factor was affecting the shallow underground water at Site MP.

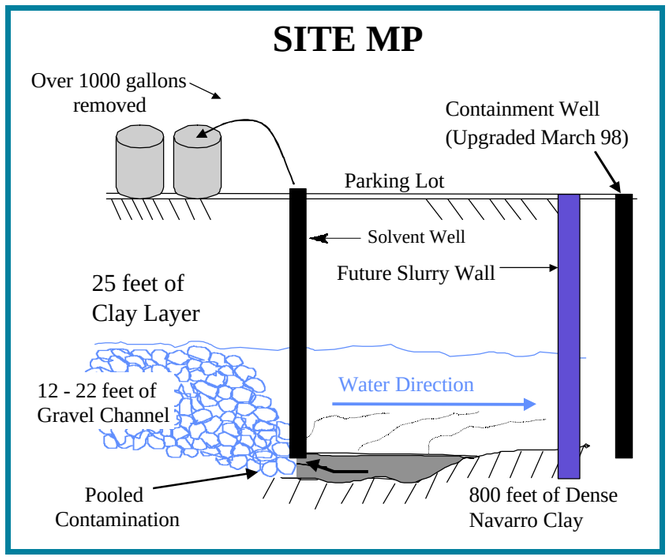
Finding the source of contamination at Site MP challenged investigators. By piecing together old construction drawings, aerial photographs, interviewing people who had worked at Site MP, as well as using high technology detection methods similar to metal detectors, investigators gathered enough information to find the contamination sources. Investigators also found that large, below ground pits, previously used for plating airplane propellers, had been filled with rubble from the building walls, which further complicated the investigation. Using highly technological equipment, a photograph of the subsurface was taken to find where a pool of chlorinated solvents had collected.

Advanced technologies helped environmental engineers improve the groundwater well extraction system. A 5-well system that could pump only 12 gallons per minute has been replaced with a new 3-well groundwater extraction system that is effectively stopping the spread of contamination by pumping at the rate of approximately 60 gallons per minute. Contaminated groundwater is sent to a groundwater treatment facility.

A solvent recovery well placed directly into the underground puddle of solvents removes the chemicals that are heavier than water. In a single month, approximately 1,000 gallons (about 13,000 pounds) of almost pure solvents were removed.

As the next step, Kelly plans to install a slurry wall about 40 feet below the ground. The wall consists of a curtain of grout or cement-like material extending from the clay layer to a point at or near the surface. It will surround the pooled solvents and prevent them from moving beyond the wall. Future plans include using advanced technologies to remove the remaining chlorinated solvent pool from within the slurry wall.

The MP site is an excellent example of how the Kelly team has applied advancements in environmental technologies to clean up contamination more efficiently.



Technology and Nature Join Forces to Clean Up Site E-3

Site E-3, a chemical evaporation pit, is located west of the Kelly AFB industrial wastewater treatment plant and east of a jet engine test cell complex, about 700 feet north of Leon Creek. The 4-foot-deep pit was initially used to evaporate solvents and later was used for disposal of other chemical materials.

At Site E-3, nature has combined forces with technology to achieve cleanup success. Contaminants originating here were once found off base. As a result of Kelly's current remediation program and natural forces that are breaking down the chemicals, contamination is largely limited to the former waste pit area. The major contaminant plume, chlorobenzene, has greatly decreased in size. Likewise, trichloroethene and its by-products, dichloroethene and vinyl chloride, have virtually disappeared.

As part of Zone 2 interim actions, a system of nine recovery wells were installed around the exterior of the waste pit and became fully operational in the fall of 1993. The recovery wells, which are still in operation, allow groundwater to be extracted using submersible pumps. The recovered groundwater is sent to the groundwater treatment plant, where it is treated and then safely released into Leon Creek at a permitted outfall. Flow rates average nearly 8 gallons per minute.

Kelly will be upgrading the interim groundwater system to remove the more highly contaminated water from the pit. In conjunction, Kelly will be installing a combination soil vapor extraction and bioventing system to treat soil in the area.

This site is one of four RCRA-regulated units at Kelly. A closure plan, which addresses the soil contamination, was submitted to the state in September 1998.

Site E-3

Ron Scharven

Kelly Air Force Base's 2 million gallon jet fuel storage tank, adjacent to North Kelly Gardens in the 1500 area, was demolished in September, 1998 after the Greater Kelly Development Corporation determined the fuel storage area was not required for redevelopment.

Plume Diminished at Site S-4

Site S-4 encompasses on-base, flight-related areas, part of the Union Pacific Railroad yard and a residential area around the storm sewer drain beneath Quintana Road. On June 2, 1988, City of San Antonio employees encountered jet fuel in the shallow groundwater while they were constructing the Quintana Road storm drainage ditch. The jet fuel had leaked from tanks and pipelines that were part of a Fuel Distribution Line System that used to underlie Site S-4. The amount of fuel that leaked into the shallow aquifer underlying Kelly Air Force Base and the surrounding area is difficult to determine Research studies estimate the amount of fuel that leaked to be several thousand gallons. The estimated quantity was based on measurements taken from on-site monitoring wells. To remove the jet fuel from the area, a 17-well interim recovery system was installed in 1989. The system is currently operating and is monitored daily.

Co-chair's tenure leads to success for Kelly's RAB

Damian Sandoval (pictured above), community co-chair of the Kelly Air Force Base Restoration Advisory Board (RAB), has been an active member of the Kelly AFB RAB since August 1997.

Mr. Sandoval has recently accepted a position in the private sector. Due to responsibilities associated with his new position, Mr. Sandoval had to resign his positions as community co-chair of the RAB and chair of the Technical Review Subcommittee.

Mr. Sandoval has served the RAB in several leadership capacities. He was elected to the office of RAB community co-chair in January 1998. He also served as chair of the Technical Review Subcommittee, a subcommittee of the RAB that reviews technical reports and information and makes recommendations for presentation of technical issues to the full RAB.

Through Mr. Sandoval's leadership, the committee provided valuable feedback and useful suggestions to the Air Force in its cleanup work.

Mr. Sandoval personally arranged for a RAB introspection workshop held in May 1998. Using a neutral facilitator, the workshop allowed the RAB members and the Air Force to identify community concerns and recommend improvements to the advisory board process. An important outcome of the workshop was the designation of a "Tiger Team", chaired by Mr. Sandoval, which developed a revised RAB Charter. His dedication and leadership to the Kelly AFB "Tiger Team" initiated the unanimous approval of the new Charter by the full RAB in July.

Mr. Sandoval also spearheaded the RAB's application for a successful contract award from the Department of Defense to pay the costs of technical assistance for RAB members. The $25,000 contract, awarded under the Technical Assistance for Public Participation (TAPP) program, was the first ever awarded to an Air Force RAB.

Mr. Sandoval proposed that the Air Force sponsor a one-hour poster session prior to each RAB meeting. The sessions have greatly increased the flow of information to the public, making it possible for citizens to talk one-on-one with Kelly staff, get answers to their questions and resolve issues on the spot.

An experienced environmental professional, Mr. Sandoval's unique background helped him understand the IRP process in general and its impact at Kelly in particular. "His technical background and his ability to work effectively with people of varying view points made him extremely effective in representing his community," said Brig. Gen. Robert Murdock, Air Force co-chair of the RAB and San Antonio Air Logistics Center vice commander. "We greatly appreciate the valuable effort and contribution Mr. Sandoval has made to the RAB and to his community."

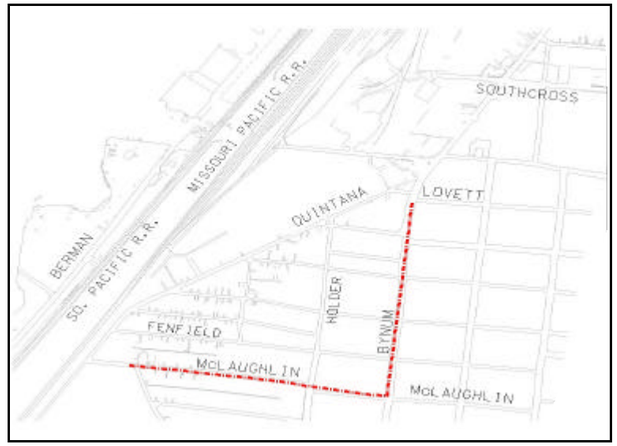
Mr. Sandoval has held environmental positions with the Texas Department of Transportation and Montgomery Watson, an environmental engineering firm. He has also served as the Base Realignment and Closure technical manager for Hamilton Army Airfield, where he supervised the U.S. Army Corps of Engineers, Sacramento District.

His environmental specialties include large-scale site investigations, feasibility studies, remedial design and remedial construction, regulatory compliance, waste management, health and safety operations and environmental remediation construction management.

He is originally from San Antonio and attended St. Mary's University, where he enrolled in the U.S. Army Reserve Officer Training Corps and received his bachelor of arts degree in biology and graduated as a Distinguished Military Graduate in the U.S. Army Chemical Corps.

Quintana Road Culvert Project to begin in 1999

The City of San Antonio (CoSA) will begin the Quintana Road culvert project in early 1999. The project, which began in 1986, was initiated by the CoSA to address the lack of an adequate stormwater drainage system in the area, was halted in 1988 when fuel contamination, originating from Kelly AFB was found. The contamination was due to leaks from tanks and pipelines that were part of a Fuel Distribution Line System that used to underlie Site S-4. Kelly AFB placed an interim recovery system to retrieve the jet fuel. Kelly AFB also discovered the presence of a chlorinated solvent plume and initiated several interim response actions to manage the impacted area.



In 1993, the City found it necessary to proceed with the drainage project but agreed to relocate the proposed system to reduce the risk of exposure to contamination for workers and Quintana Road residents. A barrier wall to halt the migration of the contamination plume will also be constructed. The route of the project is from Quintana Road to McLaughlin, east along McLaughlin to Bynum, then north on Bynum to Quintana Road. The barrier wall will be used in conjunction with extraction wells to confine the plume and prevent further migration beneath the residential neighborhood. Contaminated soil, if encountered, will be removed and paid for by Kelly AFB and disposed of by the City.

RAB Membership List

Brig Gen Robert M. Murdock, Military Co-Chair,
Vice Commander of the
San Antonio Air Logistics Center
Dominga R. Adames, Community RAB member
Gorden Banner, TNRCC Federal Facilities Unit
Administrative Subcommittee
Allan Hagelthorn, Community RAB member
Tanya Huerta, Community RAB member
John A. Jacobi, Texas Dept. of Health,
Administrative Subcommittee
Yolanda A. Johnson, Committee for
Environmental Justice-Action
Willie Jones Jr., Community RAB member
Prof. Gene W. Lene',
Chair, Technical Review Subcommittee
Dept of Earth Sciences, St Mary's University
Carl Mixon, Bexar County Fire Marshal
Sam Murrah, Community RAB member
Annalise Peace, 1997 Community Co-Chair
Paul Person, Union Pacific Railroad
Mark R. Puffer, Community RAB member
Armando C. Quintanilla, Administrative Subcommittee
George Rice, Administrative Subcommittee
Paul Roberson, Greater Kelly Development Corp.
Nicolas Rodriguez Jr, Bexar Metropolitan
Water District
Sam Sanchez, San Antonio Metro Health Dist.
Juan Solis Sr., Community RAB member
Laura Stankosky, US EPA Region VI
Ed Weinstein, San Antonio Water System

Vacant, RAB Community Co-Chair