Environmental Restoration News

U.S. Army Alaska — Fort Wainwright

Former Communications Site Update — **Summer 2011**

Summary

The Fort Wainwright Former Communication Site (FCS), often referred to as Taku Gardens, is a new housing construction project intended to provide housing for military personnel and their families. PCB contamination discovered in 2005 resulted in the United States Army Garrison, Alaska (USAG-AK), Environmental Protection Agency (EPA), and Alaska Department of Environmental Conservation (ADEC) completing an intensive area-wide investigation to determine the nature and extent of potential contamination and potentially hazardous debris. The housing will remain unoccupied until the agencies agree that there is no unacceptable risk to human health. This newsletter is intended to provide you with information about the current status of the project and plans for the future.

Site History

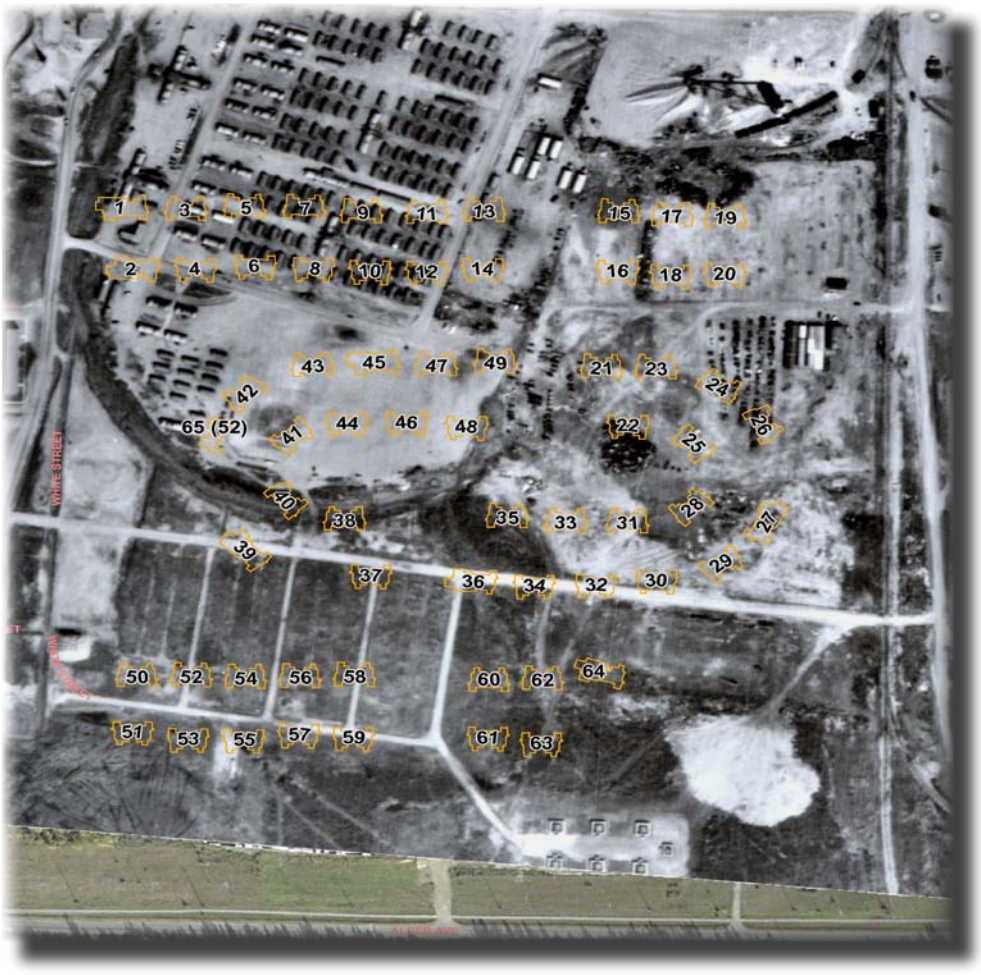
The Fort Wainwright FCS is a 54-acre site located between Alder and Neely Roads, east of White Street and west of the Power Plant. The U.S. military has occupied the general area for over 60 years, and during this time, a wide variety of land uses have occurred in various areas of the FCS project site.

Between the late 1940s and late 1950s, several areas were cleared for the construction of troop billets, motor pools, dining facilities, and other essential facilities. A significant portion of the eastern side of the area was used for equipment disposal and salvage activities, as well as a staging area for railroad construction activities and an asphalt batch plant. Some of these activities were likely associated with the dumping of trash and debris into an old slough as a convenient means of filling the historical river channel and various depressions located on the site. Such activities were common practice for filling swampy mosquito-nesting areas. Unusable military equipment and hardware used by both the U.S. Army and U.S. Air Force was discarded and buried within the FCS during this period.

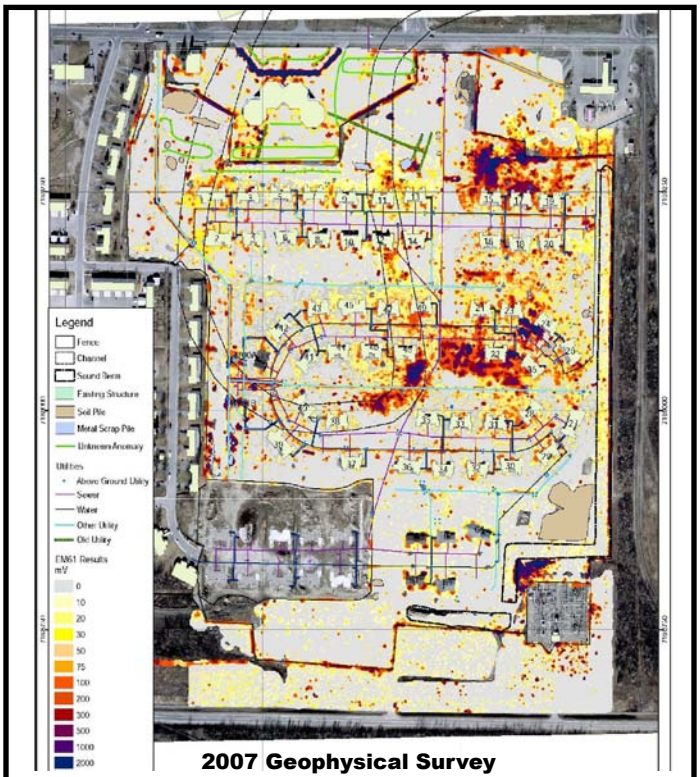
Temporary billets built for the arrival of the 3rd Battalion, 4th Infantry Regiment, as well as several Air Force units also occupied a portion of the site from 1951 to 1956.

Environmental concerns were raised during housing construction in July 2005, when an odor was detected during excavation for foundations in the southwest corner of the site. All construction activities were suspended until environmental sampling could determine the exact cause and level of contamination.

On 8 August 2005, EPA and ADEC were notified when high levels of PCBs were identified, and both organizations continue to be actively involved in the FCS environmental project.

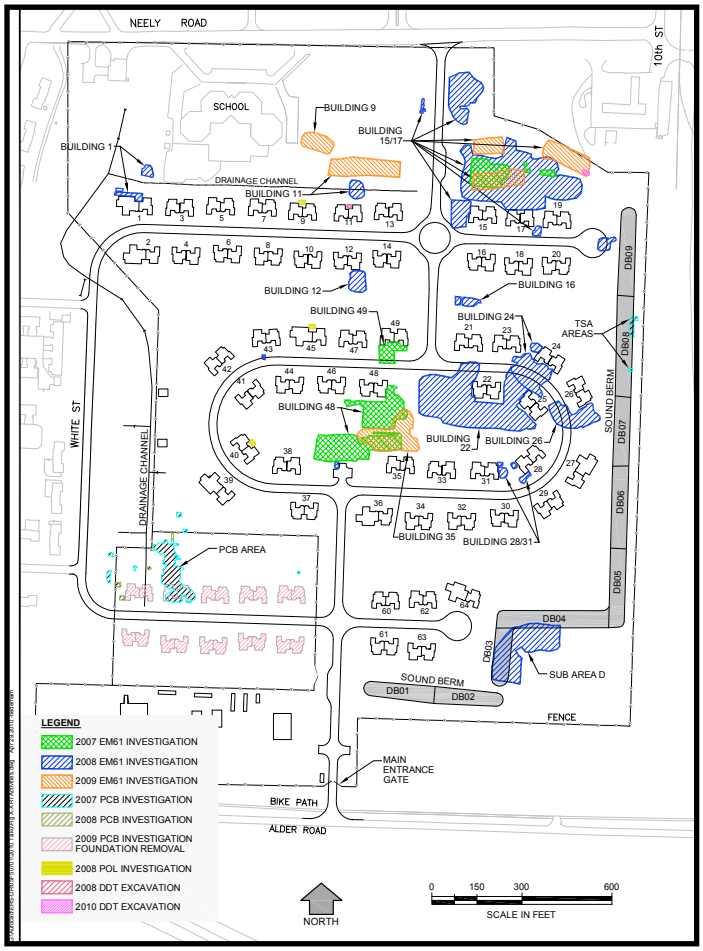


YEAR(S)	ACTIVITIES
2005	While excavating for foundations in the southwestern corner of the housing area, an odor was detected by workers. Excavation ceased and environmental sampling was conducted. When high levels of PCBs were identified, EPA and ADEC were notified. The area was restricted, and the PCB-contaminated soil was disposed of at an approved offsite location. The area was enclosed by a 4-foot chain-link fence until the PCBs were removed and subsequent investigation activities were completed. The entire construction site was restricted and enclosed in a chain link fence. At the time, 55 houses were completed and 10 houses were halted, 9 with unfinished foundations.
2005 2006	A thorough review of the historical uses of the area was conducted. Field notes and photographs taken during construction were evaluated. It was noted that many areas excavated during construction contained different types of metal debris and included stained soils and old drums. The Army, with the concurrence of EPA and ADEC, developed a Management Plan in accordance with CERCLA to investigate contamination and evaluate the risks associated with a future residential community.
2007 2008 2009	A remedial investigation which included the installation of groundwater monitoring wells, soil borings, soil-gas analyses, and test pits was conducted during the PSE I and II. Electro-magnetic surveys were conducted, and the resulting data was used to guide subsurface soil sampling, groundwater sampling, passive soil-gas sampling, and test pits which helped to delineate the contaminants of concern. During this investigation, construction and equipment debris, drums, munitions debris, and contaminated soil were removed and properly disposed of to prevent future groundwater contamination and to evaluate health risks associated with a residential community. Groundwater, surface soil, subsurface soil, and soil-gas samples were collected as follows: • 90 monitoring wells were installed and sampled semiannually to characterize potential groundwater contamination. • Soil gas and indoor air monitoring of houses was conducted to reduce the possibility of impacts to future residents. • 67 GORE™ soil-gas sampling modules were installed in order to effectively locate and delineate the source and extent of trichloropropane (TCP) contamination. • More than 1,200 surface and subsurface soil samples were collected and analyzed throughout the site. The following investigation-derived waste was removed and properly disposed of: • More than 380 tons of metallic debris • More than 3,000 cubic yards of PCB contaminated soil • Over 2,900 items classified as inert munitions related debris • Approximately 1,300 cubic yards of petroleum contaminated soil • Approximately 20 cubic yards of pesticide contaminated soil • Approximately 50 cubic yards of heavy metal/lead-contaminated soil • More than 16 cubic yards of items containing asbestos • Approximately 1060 drums  *installing GORE™ modules* **Passive soil-gas sampling** One of the investigation approaches used at the FCS was passive soil-gas sampling. In order to effectively locate the source of volatile organic compound contamination, 67 GORE™ modules were installed in the ground. These devices stayed in place for a 7-day exposure period, then were removed and analyzed. GORE™ modules are passive soil-gas sampling devices that utilize a GORE-TEX membrane to trap gas molecules while rejecting soil and water.
2010	Confirmation samples taken from a side wall of a test pit identified an isolated area containing low levels of pesticides in the soil. The area was thoroughly investigated and 50 cubic yards of pesticide-contaminated soil were removed. Other activities included groundwater, soil gas, and indoor air sampling, disposal of the remaining investigation-derived waste, and site control.



2007 Geophysical Survey

EM61 Results over 75 mV indicate areas of potential concern



The main areas of the Remedial Investigation are shown in the figures above. The top figure identifies the areas of potential concern, while the bottom figure indicates the extent of the investigation.

Current Site Status

The remedial investigation fieldwork is completed. The *Remedial Investigation /Human Health Risk Assessment Report* has been approved by the EPA and ADEC.

The *Feasibility Study Report*, completed in April 2011, has been submitted to EPA and ADEC project managers for review.

Future Actions

The Army will work with EPA and ADEC to complete the Feasibility Study review and approval process, as well as the following tasks:

- A Proposed Plan including future planned actions will be written and presented to the public for comment.
- A Record of Decision (ROD) will be completed by the Army for review and approval by the EPA and ADEC. This ROD will document past actions, identify safety and health risks, and explain remedial actions and institutional controls to be taken at the site to protect future residents.
- Prior to occupation, the Army will finish construction at this site with completion of roads, sidewalks, and landscaping. This work is scheduled to begin in the summer of 2011.

The CERCLA Process

"Superfund" is the commonly used name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a federal law enacted in 1980 and amended in 1986. It enables the EPA to respond to hazardous waste sites that threaten public health and the environment.

Remedial Investigation/Human Health Risk Assessment

The Remedial Investigation and HHRA are intended to:

- *Gather the data necessary to determine the type and extent of contamination at a "Superfund" site;*
- *Determine the risk of exposure for current and future residents.*

Contact Information

Please feel free to call Joseph Malen (907) 361-4512 or Gene Clare (907) 361-9689 if you have questions about this project.

All documents, when finalized, will become part of the Administrative Record for the FCS. These documents will be made available to the public on CDs at the Noel Wein and Fort Wainwright libraries. Hard copies will be available for viewing at the Fort Wainwright Environmental Offices, Building 3023, Fort Wainwright, Alaska.

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Glossary of Terms

ADEC	Alaska Department of Environmental Conservation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EM	Electro-Magnetic
EPA	U.S. Environmental Protection Agency
FCS	Former Communications Site
HHRA	Human Health Risk Assessment
MEC	Munitions and Explosives of Concern
PCB	Polychlorinated Biphenyl
RI	Remedial Investigation
ROD	Record of Decision

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