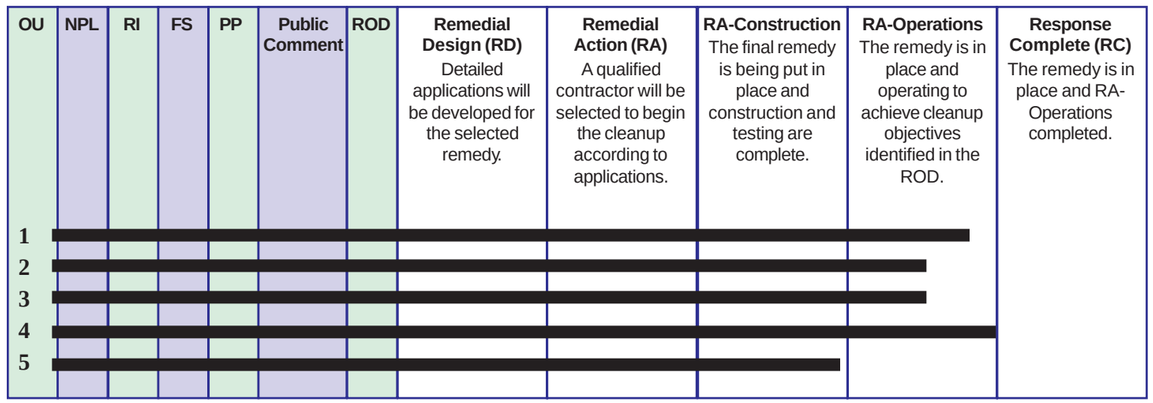
The Superfund process timetable shown below reflects the advancement of the CERCLA activities within the Fort Wainwright Environmental Restoration Program. Activities leading up to the Record of Decision (ROD) for each Operable Unit have been completed and have moved beyond the ROD milestone within the Remedial Design (RD) and Remedial Action (RA) phases, with the exception of Operable Unit 3, which was amended after the ROD was signed. Therefore, the compressed, shaded milestones indicate the pre-ROD activities and the RD/RA phases of the process are expanded.

The Superfund Process



Community relations activities take place throughout the CERCLA process, and cleanup actions take place when necessary.
Indicates status of OU within the Superfund or CERCLA process.

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Fort Wainwright, Alaska 99703-6506
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Environmental Restoration News

U.S. Army Alaska — Fort Wainwright

Fairbanks, Alaska — August 2001 — Volume 9, Number 3

RAB Field Trip

On July 17, 2001, the Fort Wainwright Restoration Advisory Board (RAB) met for an on-post fieldtrip. The group visited three sites: two areas currently under remediation and one inactive site. The two active sites were the Fairbanks Fuel Terminal and the operating systems at Operable Unit 5 adjacent to the Chena River. The inactive site was the inactive portion of the post landfill. Information about each of these areas was distributed at each location and has been included as part of the Operable Unit Updates on the following pages.

Five Year Review

Information for the 5-year review, a report on the current status of the installation's cleanup program, is still being gathered. The Remedial Project Managers (RPMs) for the U.S. Army, Alaska (Army), U.S. Environmental Protection Agency (EPA), and Alaska Department of Environmental Conservation (ADEC) have met several times to discuss the report format, required elements, and progress of the report. A draft report of the entire 5-year review was reviewed by the RPMs at the end of July. The document is scheduled to be finalized by the end of September. Once finalized, copies will be made available to interested members of the public. Copies will also be placed in the Administrative Record.

In This Issue...

Acronyms

RAB
Restoration Advisory Board

RPM
Remedial Project Manager

EPA
U.S. Environmental Protection Agency

ADEC
Alaska Department of Environmental Conservation

ATSDR
Agency for Toxic Substance and Disease Registry

PHA
Public Health Assessment

NPL
National Priorities List

ATSDR Visits Fort Wainwright

The Agency for Toxic Substance and Disease Registry (ATSDR) conducted a site visit in July 2001 at Fort Wainwright. The purpose of the visit was to collect information for an evaluation for a public health assessment (PHA). The ATSDR representatives reviewed the latest environmental information for each of the contaminated areas on-post, toured the contaminated sites, and gathered current information to describe how the local community could come into contact with the contaminants. ATSDR conducts public health assessments for all sites proposed by the EPA for the National Priorities List (NPL). PHAs are used to identify and communicate the actions that may be necessary to prevent adverse public health outcomes due to exposure to site-related contaminants.

The first visit made by ATSDR at Fort Wainwright was in 1991. The purpose was to rank Fort Wainwright with respect to the other sites on the NPL, to identify potential exposure pathways, and to notify responsible parties of situations that could affect public health. Results of this visit were communicated in a memorandum published on October 8, 1991. Additional work on this post was delayed due to its relatively low rank compared to other NPL sites under evaluation at the time and due to the limited amount of environmental sampling data available from which to make environmental health evaluations.

A second ATSDR visit was conducted in 1998 to review the results of the environmental sampling and remediation that occurred since the initial visit. After the visit, ATSDR completed an after-visit letter (dated August 4, 1998) to document the results of the preliminary examination of the available environmental sampling information. ATSDR also completed two evaluations to address specific health concerns raised by local community members. The first was a letter report (dated June 8, 1999) evaluating the incidence of learning disabilities and attention deficit disorder in the two schools serving the on-post military families. Results indicated there is no real difference in learning disabilities compared to state and national averages. Conditions on the post or the military lifestyle are not expected to cause learning disabilities. The second was a June 14, 1999, health consultation titled *The Use of*

Acronyms

VOC
Volatile Organic Compound

OU
Operable Unit

OM&M
Operation, Maintenance, and Monitoring

DRMO
Defense Reutilization and Marketing Office

AS/SVE
Air Sparging/Soil Vapor Extraction

TFS
Truck Fuel Stand

JP-4
Jet Propulsion Fuel No. 4

Mogas
Motor vehicle gasoline

CERCLA
Comprehensive Environmental Response, Compensation, and Liability Act

Groundwater for Lawn Irrigation Fort Wainwright/Shannon Park Baptist Church, which evaluated the potential health effects from using the church well to water the lawn. Results indicated that the volatile organic compounds (VOCs) detected in the well water would not cause a public health hazard when used to water the lawn.

Public health assessments are used to evaluate site-specific environmental data to determine if exposure has occurred, or may occur, at levels of health concern and to determine appropriate follow-up actions to prevent or to mitigate adverse public health affects. Valuable information is obtained from published documents, from interviews with employees and representatives of other federal, state, and local health and environmental agencies, and from discussions with local community members. ATSDR welcomes comments and concerns from the community. Community members seeking additional information may contact ATSDR, toll free, at 1-888-422-8737. Callers should refer to "Fort Wainwright" and request to contact Sue Neurath, Ph.D., environmental engineer.

Operable Unit Updates

Operable Unit (OU) 1 - 801 Drum Burial Site

The RPMs have decided to discontinue the phytoremediation study. Although the pesticides were being taken up by the plants, it was decided that disposal would be most cost-effective. The Army is still pursuing the possibility of disposing of the phytoremediation soils in the Fort Wainwright landfill. If this is not feasible, the Army will research other cost-effective methods of soil disposal. Long-term groundwater monitoring at the Former Drum Burial Site will continue on an annual basis.

Operable Unit 2

The Operation, Maintenance, and Monitoring (OM&M) plans for Building 1168 and the Defense Reutilization and Marketing Office (DRMO) Yard are being finalized. Semi-annual monitoring at Building 1168 will continue.

DRMO Yard — The air sparging/soil vapor extraction (AS/SVE) units were operating this summer in the DRMO Yard. Sampling was conducted to determine the success of the operation. A new contract will be awarded this year for the three DRMO AS/SVE systems and all monitioring in the DRMO Yard.

Operable Unit 3

Seven monitoring wells were scheduled for installation adjacent to Fort Wainwright's border near the Tank Farm area at the Bentley Trust Properties; however, only six wells could be installed. A seventh well could not be installed due to sand heaving. The wells were installed to determine if contamination has migrated off post. Results will be published in the next newsletter.

The following information about the Birch Hill Tank Farm and the Truck Fill Stand was provided to RAB members as a handout during the July fieldtrip:

The Tank Farm and associated Truck Fuel Stand (TFS) are part of the Fairbanks Fuel Terminal, which was constructed in 1943. The Tank Farm consisted of fourteen 10,000-barrel-capacity, bolted-steel fuel tanks on top of Birch Hill (upgradient of Remedial Area 1b) that contained jet propulsion fuel No. 4 (JP-4), motor vehicle gasoline (mogas), and diesel fuels. Spills occurred around the tanks throughout the fuel terminal's history as the bolted-steel tanks were subject to minor leaks. Spills also occurred at the TFS during fueling activities. Underground storage tanks located adjacent to the TFS are also thought to be a source of petroleum contamination through spills and overfilling or leaking.

planned and remain within the projected Record of Decision estimates, and make any changes as necessary. It also allows us to delete unnecessary requirements and reflect changes to projected time to clean up. We submitted this report at the end of July.

CH2M Hill and Geosphere recently traveled to the Battelle In Situ Bioremediation Conference in San Diego to highlight our "Time to Clean Up" model used on Operable Unit 5. This conference pulls together environmental personnel from all over the world to discuss their success stories, as well as their "lessons learned." Our contractor believes that our model is one of the best developed to date. It is the Army's plan to use this model for all Army restoration sites within Alaska.

We are currently reviewing the status of our Administrative Record during the Five-Year Review. Some items were noted during the review, such as the updates are currently being processed on CD, and the Noel Wein Library still does not have this capability (although we are told it will be soon). We are reviewing our options on how best to get the public the information they desire during the transition to higher technology at the library. If you have any suggestions, or know of requirements we are not meeting, please let us know!

Therese

Operable Unit Updates (Continued)

Annual inspections of the cap's integrity have been conducted. Minor repairs to the landfill cap geotextile layer have occurred. Due to an unusually dry summer in 1998, the cap had to be watered. Since then, the cap has been left to grow naturally and the integrity remains intact.

Groundwater is monitored twice yearly at the landfill in accordance with both the CERCLA requirements and the active landfill permit requirements. Two wells have "jacked" due to permafrost and will be replaced prior to the fall sampling event. A third well has deteriorated and will also be replaced. These three damaged wells will be replaced with four wells to provide better monitoring coverage.

The site was last sampled in March 2001. The table below shows which compounds were detected above the regulatory guidelines, called maximum contaminant levels (MCLs), and shows the highest level of the compound that was detected.

Compound Detected Above the MCL	MCL	Highest Level Detected
Methylene Chloride	5 µg/L or ppb	108 µg/L or ppb
Cis-1,2 Dichloroethane	70 µg/L or ppb	160 µg/L or ppb
1,1,2-Trichloroethene	5 µg/L or ppb	10 µg/L or ppb
Trichloroethene (TCE)	5 µg/L or ppb	440 µg/L or ppb
1,2 Dichloroethane	5 µg/L or ppb	5.9 µg/L or ppb

The site will again be sampled in September. New and replacement wells are being installed in August.

Coal Storage Yard — The RPMs decided not to operate the AS/SVE remediation system at the Coal Storage Yard this season. They are interested to see if contaminant levels rebound without the system in operation. A sampling event is scheduled to occur this Fall.

Acronyms

µg/L
Micrograms per liter

PPB
Parts per billion

MCL
Maximum contaminant level

TCE
Trichloroethene

EQFS
East Quartermaster Fueling System

WQFS
West Quartermaster Fueling System

Operable Unit 5

The following information about the West Quartermaster's Fueling System Remediation Systems Installation was provided to RAB members as a handout during the July fieldtrip:

OU5 includes areas that have become contaminated with petroleum and chlorinated organic compounds. The contamination resulted from activities associated with the former east and west quartermaster fueling systems (EQFS and WQFS) operations.

Planned remedial actions are intended to prevent migration of contaminants from soil "hot spots" to groundwater, improve groundwater quality, and reduce contaminant migration to the Chena River. Remedial actions selected for the WQFS include AS/SVE treatment within hot spots and a downgradient sparging curtain. This includes three additional systems (WQFS1A, WQFS1C, and WQFS2) to be installed during 2001. The selected remedy for EQFS is natural attenuation in soil hot spots and operation of an AS/SVE system at Building 1060W.

2001 Construction Activities

Construction activities planned for summer 2001 include the following:

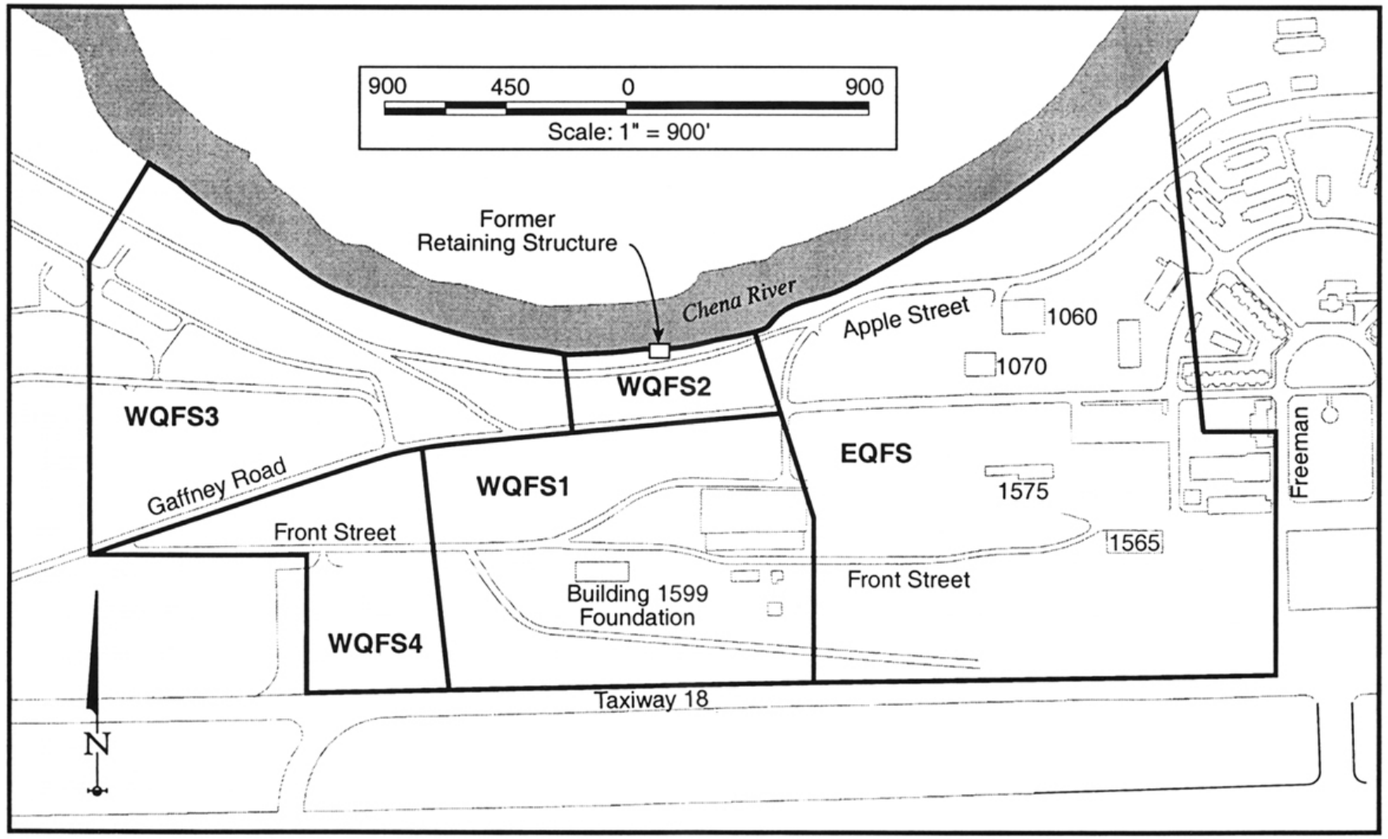
- Installation of 95 AS and 15 SVE wells at WQFS1A
- Installation of 75 AS and 12 SVE wells at WQFS1C
- Installation of 12 AS and 3 SVE wells at WQFS2
- Installation of 3 groundwater monitoring wells in WQFS
- Decommissioning and/or removal of wells and associated appurtenances from various treatment technology testing sites in WQFS

When installation is complete, WQFS1A system will connect to the existing Source Area and Horizontal Well treatment system connexes; the WQFS1C system will connect to the existing Sparge Curtain and Source Area treatment system connexes; and the WQFS2 system will be connected to the existing Sparge Curtain treatment system connex.

Current Construction Status

The AS/SVE and groundwater monitoring wells are in the process of being installed at all three sites. Trenching, piping and well connection activities are underway, and it is anticipated that all three sites will be fully operational by September 2001.

WQFS Subareas and EQFS Area



Note: WQFS1A and WQFS1C are subareas within WQFS1. These areas are not easily depicted on a map of this scale.

Between RAB Meetings

We have been busy with the summer field season. Dig permits are flying through the Environmental Office, with our personnel ensuring those digging are made aware of any potential contamination they may encounter during their project. Dig permit holders are advised that should any contamination be found, digging is to stop immediately and the Environmental Office (as well as the Emergency Response Office/Fire Department) be notified. This is part of the Institutional Controls Policy in effect for U.S. Army Alaska to ensure the safety and health of those working on the installation.

One of the bigger projects for this summer is underway along the airfield. Old pipelines will be pigged and capped, similar to the work completed last summer along the old pipelines. While this is not a "restoration" project, we will be interested in keeping track of any contamination found. The project will include the outline of the airfield and will go through some active treatment areas. Should large areas of contamination be found, the excavation process will stop (similar to that noted above), while the Army and State determine the best process for action.

We have been busy preparing our "Costs to Complete" submission to the Army Environmental Center. This estimation process causes us to review projected costs to close out each site, ensure that the costs are reasonable for the work

The primary sources of contamination at Remedial Area 1b are associated with fuel and fuel additives storage, transfer, and handling activities and the Fairbanks Fuel Terminal and the TFS.

The Remedial Area 1b Comprehensive Environmental Response, Compensation, and Liablity Act (CERCLA) history and plans for remediation are summarized as follows:

Preliminary Assessment/Site Investigation	Completed January 1991
Remedial Investigation/Feasibility Study	Completed September 1995
Record of Decision	April 1996
Remedial Design	Completed July 1996
Remedial Action Begins	July 1996
Remedial Action Operation and Maintenance	Ongoing through 2002
Long-Term Monitoring Completion	Estimated September 2017

Status of Remediation

Lazelle Road Sub-Area – Air Sparging and Soil Vapor Extraction
The AS/SVE system was initially installed in 1996. Remedial action objectives were met; therefore, the treatment unit connex was moved in 1997 for use at the TFS. The Building 1173 treatment system was expanded in 1997 to cover the Lazelle Road sub-area. The system has been moved again, and long-term groundwater monitoring continues in this area.

Building 1173 Sub-Area – Air Sparging and Soil Vapor Extraction
The AS/SVE system was initially installed in 1996 and expanded to its current size in 1997. The treatment system operates seasonally. Off-gas emissions are controlled by the use of a thermal oxidizer. To date the treatment system has removed 72,693 pounds of VOC.

Truck Fill Stand Sub-Area – Air Sparging and Soil Vapor Extraction
The AS/SVE system was initially installed in 1997 and is operated seasonally. To date the treatment system has removed 4,776 pounds of VOC.

Thaw Channel Treatment System – Air Sparging Curtain
In situ treatment of groundwater by air sparging was selected to prevent off-post migration of fuel components, such as dichloroethane (DCA), along the west boundary of the post in the thaw channel identified north of the TFS. Five air sparging wells were placed in a line to form a sparge curtain in August 1999; the system is operated continuously.

Birch Hill Aboveground Storage Tanks Sub-Area – Free Product Recovery System
A free product recovery system was installed in 2000 with recovery wells placed in areas of highest product thickness. The treatment system was to be evaluated and modified as necessary to optimize effectiveness in achieving remedial action objectives. To date the product recovery system has removed 21 gallons in a short operating period during 2000. Previous efforts at product recovery on Birch Hill have removed approximately 4,100 gallons of product.

Operable Unit 4

The following information about the inactive landfill was provided to RAB members as a handout during the July fieldtrip:

In accordance with the Record of Decision for OU4, 14 acres of the inactive portion of the landfill were capped. The intent of the low permeability cap was to seal the surface of the inactive portion of the landfill. The final cap consisted of 18 inches of low-permeability silt over the site overlain by a drainage layer consisting of 6 inches of local graded sand, which is then overlain by 6 inches of topsoil and wildflower seed. The landfill capped portion was enclosed by a 6-foot-high chain link fence, completed in 2000, to control access and allow the cap to grow undisturbed. The cap was completed in 1997.