Environmental Restoration News

U.S. Army Alaska — Fort Richardson

Anchorage, Alaska — December 2002 — Volume 8, Number 3

RAB Update

The Fort Richardson Restoration Advisory Board (RAB) met at the Russian Jack Chalet on October 24, 2002. Agenda items included updates about the Two-Party Agreement sites and the Operable Units and information on the proposed deployment of the Rapid Response System to Fort Richardson. These topics are summarized in this newsletter.

The next RAB meeting has been tentatively scheduled for 7:00 p.m. on Thursday, January 23, 2003, at the Russian Jack Chalet. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review for Fort Richardson is scheduled for signature in early 2003; information about the Five-Year Review will be presented at the RAB meeting in January.

RAB Membership

The Army is considering beginning a campaign to gain RAB members in January 2003. If you are interested in becoming a Fort Richardson RAB member and can attend quarterly RAB meetings, please call the Army's Fort Richardson Project Manager, Dr. Mark Prieksat, at 384-3042.

Five-Year Review

The CERCLA Five-Year Review for Fort Richardson has been completed and will be sent out to the ADEC and EPA for review. Once the agencies have made their comments, the comments will have to be incorporated into the document before public review.

A Five-Year Review is conducted at sites where remedial investiation/action is ongoing, such as at Operable Unit E at Fort Richardson. The review either confirms that any immediate threats have been addressed or, when the remedy is not performing as designed, the report recommends actions to improve performance.

A review is triggered by the initiation of the first remedial action that leaves contamination in place above levels that allow for unlimted use and exposure. At OU A/B, the start of remedial action was February 22, 1998, so the review has to be completed by February 22, 2003.

The Army is responsible for funding and conducting the review; often, the Army hires an environmental contractor to conduct the review. The Alaska Department of Environmental Conservation (ADEC) and the U.S. Environmental Protection Agency (EPA) participate in development, review, and signature.

For the Fort Richardson Five-Year Review, the ADEC and EPA have asked that the document be ready for public review by late February 2003.

Announcements will be placed in newspapers informing the public that the Five-Year Review is available and will include where the document can be accessed and how to make comments.

ACRONYMS

ADEC Alaska Department of Environmental Conservation
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
EPA U.S. Environmental Protection Agency
OU Operable Unit
RAB Restoration Advisory Board

IN THIS ISSUE

RAB UPDATE.....1
RAB MEMBERS NEEDED.....1
FIVE-YEAR REVIEW.....1
TWO-PARTY AGREEMENT SITES.....2
INFORMATION REPOSITORIES.....5
OPERABLE UNIT UPDATES.....5
PROPOSED DEPLOYMENT OF RAPID RESPONSE SYSTEM.....7
HOW TO CONTACT US.....8

Two-Party Agreement Sites

Building 762/786

The 762/786 site, at 6th and D Streets, is a former gas station site that has most recently been used for drivers' training. An on-site investigation discovered diesel range organics (DRO) contamination. An additional geophysical investigation using ground-penetrating radar conducted by the U.S. Army Cold Regions Research and Engineering Laboratory may have found evidence of the source of the DRO, potentially a concrete pipeline leading to a dry well. No records have been found to indicate what those facilities were used for before approximately 1970. A 1954 aerial photograph shows what is presumed to be an individual command center consisting of one large building and several Quonset huts. The foundation for the large building in the center of the command center is still present at the site. There were many such command centers around Fort Richardson at that time. Groundwater monitoring wells in the area have diesel free-product, and groundwater analytical results indicate up to approximately 14,000 parts per million DRO.

The Army's investigation of the site included analyzing for a full suite of constituents including pesticides, polychlorinated biphenyls, gasoline range organics, residual range organics, and volatile organic compounds.

The Army has awarded a contract to perform an additional site investigation and to install upgradient and downgradient sentinel wells based on geophysical data. The work will likely begin in the spring of 2003. The goal of the investigation is to find a source area that can then be remediated. If results of the site investigation, which includes excavation of potential source areas, does not identify a source area, the Army will develop an exit strategy to include long-term monitoring of contaminants in groundwater at the site.

Building 986

This site was the petroleum, oil, and lubricants (POL) laboratory. The site has a soil vapor extraction treatment system in operation. The Army has completed the third round of respirometry testing, which shows that treatment is occurring. The Army plans to continue system operation through the summer 2003 field season and then take confirmation soil samples in the fall of 2003. The soil piles have been sampled and transported off site to Alaska Soil Recycling for thermal treatment. The only contaminants detected were petroleum-related.

Building 987

This building was the pump house at a former POL storage facility. Two new downgradient wells have been installed to evaluate groundwater conditions at the

Two-Party Agreement Sites

site. Groundwater samples were collected at the end of October 2002. The U.S. Army Corps of Engineers (USACE) is developing a site evaluation to include current soil and groundwater conditions. The Army will develop a remedial action plan or exit strategy based on site evaluation and discussions with the ADEC.

Building 28008

This is the site of the water treatment facility on Fort Richardson, located off Arctic Valley Road east of the Moose Run Gold Course. Biannual groundwater sampling has been conducted at the site. Results indicate that a plume containing petroleum-related compounds is stable; however, concentrations of certain chemical analytes may be increasing. The Army is evaluating several options for remedial action

at this site, including the use of a surfactant injection and recovery system, which involves injecting a food-grade surfactant, stripping the contaminants from the water, and reinjecting the water. Building 28008 is a difficult location to conduct remedial activities because of the presence of the building over the plume and the topography in the area.

The source of the contamination has been difficult to determine. Two 10,000-gallon tanks were removed, and a new tank was placed right back in the hole. Very limited contaminated soil excavation was performed. Free product has been found in various wells on different sides of the building as the petroleum-product plume migrates with the seasonal changes in the water levels. The former tanks were located up against the building, and the source is likely right under the building. The groundwater flows from the topographically high area (from the former tank location), beneath the building, and down the hill to the topographic low area. The wells around the water treatment plant contain free product. Fort Richardson will soon be switching to natural gas, which will give the Army an opportunity to remove the new fuel tank and excavate contaminated soil that was left in place during the tank replacement. The Army should know whether tank removal and surfactant injection are options by the end of the year (2002).

ACRONYMS

ADEC
Alaska Department of Environmental Conservation
DRO
Diesel range organics
POL
Petroleum, oil, and lubricants
USACE
U.S. Army Corps of Engineers

Building 35610/35620 Site

These buildings are pump houses used to operate backup water supply wells on Fort Richardson. The next biannual groundwater sampling event occurred in the fall of 2002, depending on when funding is awarded. Significant source removal was performed at these sites about 2 years ago. Sampling results from quarterly sampling activities indicate that petroleum contaminants are below cleanup

Two-Party Agreement Sites

levels. If the spring 2003 groundwater sampling results are similar, the site may qualify for closure.

Building 47220 Site

This is the site of a former underground storage tank (UST) at the Old Boat Yard near Bryant Army Air Field. The Army has conducted a limited source removal at the site to remove contaminants located in the area around the former UST. Minimal petroleum contamination was detected during excavation; the soil was excavated for thermal treatment. A leachability assessment demonstrated that there would be no breakthrough of contaminants to groundwater, and no groundwater contamination has been detected at the site. The Army will seek to close the site with institutional controls for soil.

Building 45070 Site

Building 45070 is located on Circle Drive, west of Loop Road. Soil and groundwater have been impacted by petroleum-related compounds, possibly released from a 1,000-gallon heating oil UST, which was installed on the west side of the building. Groundwater monitoring wells were sampled biannually during 1998-99 and were sampled once during 2000.

Currently, quarterly groundwater monitoring is being conducted in an effort to close the site. Recent sample results have shown no detectable levels of contaminants at the site. The last sampling event is planned for the spring of 2003. The Army will then seek site closure from ADEC.

ACRONYMS

ADEC
Alaska Department of Environmental Conservation
EPA
U.S. Environmental Protection Agency
OU
Operable Unit
ROD
Record of Decision
UST
Underground Storage Tank

Building 59000 Site

This site is at the Small Arms Range and was formerly a self-contained operations bunker. A contract has been awarded to install upgradient and down-gradient sentinel wells. The diesel contamination at the site originated from two 10,000-gallon fuel tanks located at the site. Previous investigations have not detected high levels of soil contamination at the site, but groundwater is contaminated, and one monitoring well contains free product. A free-phase product collection system has been installed in well AP-3875. The Army plans to develop a long-term monitoring plan and exit strategy for this site. Long-term monitoring is expected to continue until the Army can show that the plume is stable and contaminant concentrations are decreasing.

Information Repositories

The Fort Richardson Administrative Record is located in four information repositories in the Anchorage area. The information repositories contain microfiche copies of the Administrative Record, an index of documents, and site summaries for each of the five Operable Units at Fort Richardson. The information repositories are listed below:

U.S. Army Alaska
Directorate of Public Works
Environmental Resources Department
730 Quartermaster Road, Bldg. 724
Fort Richardson, AK 99505-6500
(907) 384-3042

Hours: Monday through Friday, 8 a.m. to 5 p.m.

(This office maintains the Administrative Record in paper form, on microfiche, and on CD-ROM.)

Fort Richardson Post Library
Building 636
B Street
Fort Richardson, AK 99503
(907) 384-1648

Hours: Monday through Thursday, 11 a.m. to 8 p.m.; Saturday 11 a.m. to 5 p.m.; closed on Friday and Sunday.

Alaska Resource Library and Information Services
3150 C Street
Anchorage, AK 99503
(907) 272-7547

Hours: Monday through Friday, 8 a.m. to 5 p.m.

University of Alaska Anchorage
Consortium Library
(Reserve Desk)
3211 Providence Drive
Anchorage, AK 99508
(907) 786-1871

Hours: Monday through Friday, 7:30 a.m. to 11 p.m.; Saturday, 10 to 6 p.m.; Sunday, noon to 11 p.m.

Operable Unit Updates

Operable Unit B – Poleline Road Disposal Area

At Operable Unit (OU) E, six-phase-heating arrays were decommissioned during the fall of 2002. Geophysical investigations were conducted during the summer of 2002 to delineate geology at the site and enhance development of the groundwater model. Additional groundwater wells will be installed at the site to collect information to ground-truth the geophysical data and to gather more information concerning groundwater flow at the site. The USACE has contracted a drilling company to install six deep and six shallow groundwater wells at the site. The deep wells are intended to determine the depth of bedrock, which is suspected to be present at approximately 200 feet below ground surface. Well installation should be completed by the end of 2002.

An updated groundwater model will be completed in the spring of 2003. The Army continues to sample groundwater from the site on a biannual basis. The groundwater contaminant plume appears to be stable, and levels have not rebounded after remediation efforts. It is not yet clear whether natural attenuation is occurring. The Army will develop a long-term groundwater monitoring plan and exit strategy that is consistent with the requirements of the Record of Decision (ROD). Upon completion and validation of the exit strategy program, the Army will cooperatively develop an exit strategy with the EPA and ADEC.

Operable Unit Updates

Operable Unit C - Eagle River Flats

The fourth field season has been completed. Pumps and equipment were removed in August 2002 from Eagle River Flats. The floodgate that was installed last winter to inhibit tides and promote better drainage of the Bread Truck Ditch was washed out after about 2 weeks. The floodgate will likely be replaced in late February 2003 using larger rocks.

A bird mortality study is nearing completion. Last year (2001), approximately 100 birds were outfitted with telemetry packs; this year, approximately 75 birds were outfitted. The telemetry data are not all in yet, but the mortality rate appears to be very low this year even though the birds remained approximately 3 weeks longer than past years, probably due to the mild weather.

Field data are currently being analyzed, and the results were presented at a working group meeting in Seattle I involving the Army, EPA, ADEC, and CRREL November 18-21..

The year 2003 is the last of 5 years of active pumping as required by the OUC ROD. The Draft Interim Remedial Action Report (RAR) has been completed and is being reviewed by the EPA and ADEC. Upon completion (finalization) of the RAR, the Army will achieve construction complete status at the site, which indicates that the remedy is in place and operational.

Operable Unit E - Armored Vehicle Maintenance Area and Building 35-752

A remedial investigation (RI) has been under way since the spring of 2002. The RI report is scheduled to be completed in February 2003; however, this deadline may be pushed back because of difficulties in drilling monitoring wells at some of the sites. Preliminary results indicate that neither of the OUE sites poses a significant risk to human health and the environment. However, no source area has been identified for the groundwater plume in the Armored Vehicle Maintenance Area. A contract to conduct a feasibility study has been awarded and will be completed in late 2003 or early 2004.

ACRONYMS

ADEC
Alaska Department of Environmental Conservation
EPA
U.S. Environmental Protection Agency
CRREL
U.S. Army Cold Regions Research Environmental Laboratory
OU
Operable Unit
RAR
Remedial Action Report
RI
Remedial Investigation
ROD
Record of Decision

PROPOSED DEPLOYMENT OF RAPID RESPONSE SYSTEM

Chemical Agent Identification Sets (CAISs) were produced through the Vietnam era and were small containers (3 to 3.5 ounces) of chemicals used to train soldiers in how to identify and handle chemicals.

Poleline Road Overpacks

The 1993-94 Poleline Road removal action unearthed ten overpacks (PIGs). Seven of the PIGs contained potentially agent-contaminated material and are currently being stored at Bunker D-15 on Fort Richardson. An additional PIG was discovered at the Tin City site in 2000, and that item was also brought to Fort Richardson for storage.

Six of the eight overpacks appear to contain debris from training, and the remaining two appear to contain the K941 test kits with an agent.

In addition to the PIGs, three smaller containers of chemical agent were discovered. Most appear to contain mustard agent, and the contents of one is yet to be determined. These items were packed into laboratory sample containers (sealed stainless-steel containers) and are stored at Fort Richardson.

Purpose of the RRS

The Rapid Response System (RRS) was built to mobilize to remote locations and to neutralize the chemicals. The RRS consists of two trailers, an operations trailer, and a utility trailer. A mobile laboratory and command post often accompany the RRS. The RRS provides a safe, mobile, self-contained system for treatment of CAIS and other agent-contaminated items.

Neutralization Process

The neutralization process includes securing containers of CAIS items, cutting them open, unpacking them, segregating the chemicals, and neutralizing the contents or repackaging the contents for disposal. The processing areas within the RRS are designed with relative negative pressure so that chemicals will not leak from the chamber in which they are being processed. The chambers are enclosed, and air is filtered before being discharged. Discharged air is monitored for the presence of chemical agents.

No munitions, explosives, or radioactive items are processed through the RRS. The RRS was designed for chemicals, including some industrial chemicals such as phosgene. The RRS was tested extensively at the Desert Chemical Depot in Utah, using over 1,200 CAIS items and a broad variety of chemicals. The system is now approved for operational use at other locations.

No munitions, explosives, or radioactive items are processed through the RRS.

2003 Fort Richardson RRS Schedule

The RRS is scheduled to be deployed to Fort Richardson in the summer of 2003. The operating crew will be a Teledyne Brown Engineering group with extensive experience and training in hazardous materials and RRS/CAIS operations. The entire operation is planned for April to September 2003 and will be performed in conjunction with EPA and ADEC involvement. The plan is to transport the RRS to Fort Richardson in April and unpack and set up the RRS in May. Baseline studies and safety surveys will be conducted in June and July. The CAIS operations will be conducted over 2 to 3 weeks in July or August. The system will be demobilized in September 2003.

ACRONYMS

ADEC
Alaska Department of Environmental Conservation
CAIS
Chemical Agent Identification Sets
EPA
U.S. Environmental Protection Agency
RRS
Rapid Response System

TO CONTACT US

If you have questions about the environmental program at Fort Richardson, or would like to be added or deleted from the mailing list, please contact:

Mark Prieksat
Fort Richardson Project Manager and RAB Army Co-Chair
U.S. Army Alaska
ATTN: APVR-RPW-EV
730 Quartermaster Road, #6500
Fort Richardson, AK 99505-6500
Phone: (907) 384-3042
E-mail: mark.prieksat@richardson.army.mil

U.S. Army Alaska
Attn: Mark Prieksat
Environmental Resources Department
730 Quartermaster Road
Fort Richardson, AK 99505-6500