



# Environmental Restoration News

U.S. Army Alaska

Fort Richardson

Anchorage, Alaska

February 2002

Volume 8, Number 1

## RAB Update

On January 24, 2002, the Fort Richardson Restoration Advisory Board (RAB) met at the Russian Jack Chalet. Agenda items included updates about the Two-Party Agreement sites and the Operable Units. Dr. Mark Prieksat, the Army Co-Chair, gave a presentation to the RAB members about the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review scheduled for Fort Richardson (see related article on page 2).

The next RAB meeting has been tentatively scheduled for April 25, 2002, and will also be held at the Russian Jack Chalet.

## Alaska Forum on the Environment

The Fourth Annual Alaska Forum on the Environment was held in Anchorage from February 4 through 8 at the Egan Center. This is the annual conference that includes the Statewide RAB meeting which was held on February 7 from 8:00 a.m. until 5:00 p.m. All Community Co-Chairs from RABs around the state were invited to attend.

The session focused on Co-Chairs and provided an opportunity for several training sessions in the morning, and the afternoon was devoted to Co-Chair working groups. Mr. John Hopkins, the Fort Richardson RAB Community Co-Chair, also attended the daylong session.

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## TO CONTACT US

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## ACRONYMS

**CERCLA**  
 Comprehensive Environmental Response, Compensation, and Liability Act  
**RAB**  
 Restoration Advisory Board



# CERCLA Five-Year Review

The purpose of the Five-Year Review is to evaluate the performance of a selected remedy at a site to ensure the remedy is or will be protective to human health and the environment. In addition, the Five-Year Review evaluates the performance of the remedy.

The review should confirm the protectiveness at sites where long-term monitoring or institutional controls are in place. An assessment of “no action” or “natural attenuation” remedies is also included in the review. At sites where remedial investigation or action is ongoing (for example, Operable Unit E [OUE]), the review should confirm that any immediate threats have been addressed. When the review indicates that the remedy is not performing as designed, actions to improve performance will be recommended.

## Conditions Requiring a Review

The statutory requirement for the Five-Year Review was added to CERCLA as part of the Superfund Amendment and Reauthorization Act in 1986. A Five-Year Review is legally required when both of the following conditions are met:

1) contaminants will remain in place above levels that do not allow for unlimited use and unrestricted exposure; and

2) the Record of Decision (ROD) was signed after October 17, 1986.

## Federal Facilities Agreement

In addition, the Five-Year Review is required under the Federal Facilities Agreement (FFA) signed between the Army, the Alaska Department of Environmental

Conservation (ADEC), and the Environmental Protection Agency (EPA) for Fort Richardson in 1994. The FFA allows the project managers from the Army, ADEC, and EPA to determine if additional action is required to ensure protectiveness.

## Trigger Date

The Five-Year Review is to be completed within 5 years of the initial trigger date. A review is triggered by the initiation of the first remedial action that leaves contamination in place above levels that do not allow for unlimited use and exposure.

The start of remedial action at Fort Richardson was for Operable Unit A (OUA) and Operable Unit B (OUB) on February 22, 1998; therefore, the Five-Year Review must be completed by February 22, 2003. Subsequent reviews must be completed no later than 5 years following the signature of the previous review. Reviews may be

**ELEMENTS OF A CERCLA REVIEW**  
—Notification  
—Data Evaluation  
(interviews, documentation review,  
and site inspections)  
—Reporting

conducted more frequently if needed to ensure protectiveness.

## Sites with Multiple OUs

Reviews for sites with multiple Operable Units (OUs) will address all OUs and remedial actions which have been initiated at the time of the review. The Fort Richardson Five-Year Review will include all the Two-Party sites in addition to all the CERCLA OUs (A, B, C, D, and E).

## Agency Involvement

The Army is the lead agency and is responsible for funding and conducting the Five-Year Review.

The actual document will likely be researched and written by an environmental contractor. The ADEC and the EPA participate in the development of the document and its review and will also sign the final version.

The results of the review should clearly state the protectiveness

of the remedy; document any deficiencies; recommend specific actions to ensure protectiveness; include follow-up actions, if necessary; and may recommend optimization of remedies at sites with ongoing remedial action.

## Public Notification

There is a community involvement aspect to the Five-Year Review. The public is notified when the review is being conducted and when the review is complete. There will be presentations about the review at either the April 2002 or Fall 2002 RAB meeting and the review or a summary of the review will be distributed to interested parties once completed.

## ACRONYMS

**ADEC**  
Alaska Department of Environmental Conservation  
**CERCLA**  
Comprehensive Environmental Response, Compensation, and Liability Act  
**EPA**  
U.S. Environmental Protection Agency  
**FFA**  
Federal Facilities Agreement  
**OU**  
Operable Unit  
**RAB**  
Restoration Advisory Board  
**ROD**  
Record of Decision

# Two-Party Agreements

**Building 762** – Additional groundwater monitoring wells have been installed at the site. The latest round of soil and groundwater sampling at the cross-gradient site (former Bldg. 786) is complete, and the Army is currently awaiting results. During installation of one groundwater monitoring well, an odd pepper-like odor was detected in soil samples collected by the field crew. Analysis of samples collected from the area indicated that no chemical warfare materials were present, and other analytical tests did not detect any chemicals other than petroleum-related compounds. Preliminary sample results indicate that the primary contaminant at the site is diesel range organics. The U.S. Army Cold Regions Research Environmental Laboratory (CRREL) plans to conduct a geophysical investigation at the site to attempt to locate a source area. A draft remedial investigation report is currently being prepared.

**Building 986** – The bioventing system at this site had been operating for the past several years, but recently the soil vapor extraction (SVE) system was brought back into operation. The last soil sampling event conducted at the site indicated that the contamination that remained in place had migrated downward. Therefore, the SVE system was brought back on-line in an effort to remediate the contaminants that appear to have consolidated at depth. Soil stockpiles excavated from Buildings 986 and 987 will be sampled and removed from the site for off-site treatment.

**Building 987** – Results of soil sampling at the site indicate that areas of petroleum contamination exist at the former locations of a pump house, truck fill stand, and rail loading rack. The U.S. Army Engineer District – Alaska is planning a site evaluation to determine an effective way of handling this site. The groundwater plume at the site appears to be stable; however, it was last sampled in 1998. The Army is in the process of evaluating the need for additional downgradient groundwater monitoring wells. There is a potential for long-term groundwater monitoring at this site.

**Building 28008** – The October 2001 groundwater sampling results indicate that groundwater contamination is present on site. Free-phase petroleum product was detected in several of the groundwater monitoring wells. A remedial design report is being developed and should be available by the end of February.

**Buildings 35610 and 35620** – Fall groundwater sample results indicate that benzene was the only contaminant detected; however, benzene was also detected in a rinsate sample, which make the results suspect. The Army plans to resample the wells to confirm the presence of benzene. No other petroleum-range contaminants were detected.

**Building 47220** – An investigation of an underground storage tank (UST) at this site indicates that petroleum contamination is confined to soil near the former location of the UST. Groundwater is not contaminated; however, the Army is conducting a leachability assessment to determine the

potential for contaminants to migrate from soil to groundwater. The Army is evaluating the need for a limited source removal in the area around and beneath the former UST location.

**Building 59000** – Free-phase petroleum product (diesel fuel) remains present in one of the monitoring wells at this site. Additional wells were installed because recent information indicated that the two existing wells were not downgradient of the source area, as previously thought. Preliminary results from the new downgradient wells indicate the presence of a groundwater contaminant plume. All wells at this site will be resurveyed to determine a more accurate groundwater gradient and flow direction.



## ACRONYMS

<b>CRREL</b> U.S. Army Cold Regions Research Environmental Laboratory
<b>SVE</b> Soil Vapor Extraction
<b>UST</b> Underground Storage Tank

# Operable Unit Updates

## Operable Unit B – Poleline Road

The results from the long-term groundwater monitoring report for October 2001 indicate that there has been very little change in contaminant concentrations since the last monitoring event. The report recommends a change in sampling frequency from biannually to annually, and the Army is working on an Interim Remedial Action Report for the site that will look at monitoring alternatives. Low groundwater flow at the site indicates that it may take many years before the results of the source reduction effort are apparent in downgradient wells.

CRREL has completed a preliminary hydrogeologic model of the site. This model indicates that no new source areas are present at the site, and it appears that the six-phase soil heating treatment was effective in treating the “hot spot.” At this time, the Army is planning to conduct long-term groundwater monitoring at the site and will install additional downgradient monitoring wells.



- October 2001 long-term groundwater monitoring report for OUB is available. Report shows very little change in contaminant concentrations from the last monitoring event.
- Report recommends annual sampling.
- Low groundwater flow at the site indicates that it may take years for the results of the source reduction to be seen in downgradient wells.



- OUC is in the third year of post-ROD remedial activities.
- During each field season, six pumping systems have been placed into contaminated ponds.
- Sampling activities are performed each season to determine the extent that white phosphorus is being reduced.

## Operable Unit C – Eagle River Flats

The third year of post-ROD remedial activities is complete, and the fourth field season is being planned for OUC. During each field season, six pumping systems have been placed into contaminated ponds and operated to drain water from the ponds. Sampling activities are also performed each season to determine the extent white phosphorus is being reduced and to locate new pond areas that may require remediation. In addition, duck mortality studies are conducted to determine an approximate number of deaths attributable to white phosphorus contamination.

Results of field activities to date have shown a dramatic decrease in white phosphorus concentrations. Remediation is complete in three of the contaminated ponds, and significant (cont. on p. 5)

# Operable Unit Updates

ACRONYMS	
<b>AVMA</b>	Armored Vehicle Maintenance Area
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation, and Liability Act
<b>CRREL</b>	U.S. Army Cold Regions Research Environmental Laboratory
<b>OU</b>	Operable Unit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>ROD</b>	Record of Decision

(cont. from p. 4)

progress has been made in other ponds. Current information suggests that meeting the short-term remedial action objective, to reduce the duck mortality rate to 50 percent of the 1996 mortality rate (i.e. to about 500 deaths), is an achievable goal. The long-term goal, to reduce duck mortality to no more than 1 percent of the total fall

population of dabbling Eagle River Flats ducks (i.e., about 50 deaths), appears to be achievable as well.

The ROD calls for remedial activities, such as pond pumping, to continue through the 2003 summer season. Bird mortality studies will continue annually until 2008 and every 5 years thereafter until 2018. The CERCLA Five-Year Review will also examine the effectiveness of the

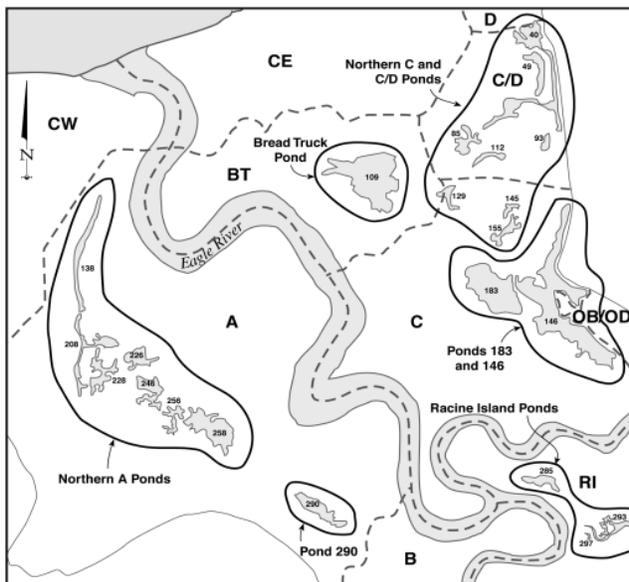
remedial alternatives for OUC, as well as the other OUs, and make a determination whether or not the remedial action objectives and other stipulations in the RODs have or will be met.

## Operable Unit D

All OUD sites are now closed under the CERCLA program. The Army is still working on Resource Conservation and Recovery Act (RCRA) Closure Plans for a number of OUD sites.



- Draft Final Management Plan is available for OUE.
- Scope of Work prepared for conducting Remedial Investigation.
- September 2001 groundwater sampling report is available.
- Low levels of contaminants were detected in groundwater at the Building 35-752 site and at AVMA site.



Pond Groups at OUC.

## Operable Unit E

The September 2001 groundwater sampling report is available for review. Results of the groundwater sampling indicated low levels of contamination were detected in groundwater at the Building 35-752 site and at the Armored Vehicle Maintenance Area (AVMA).

The Management Plan for OUE was completed in early February. The contract award for the Remedial Investigation at the site is scheduled for mid-February with fieldwork to begin this summer field season.



## NEXT RAB MEETING

The next Fort Richardson RAB meeting is scheduled for Thursday, April 25, 2002, at the Russian Jack Chalet. The meeting is open to the public and is scheduled from 7:00 p.m. to 8:00 p.m.

If you have any questions, please contact Mark Prieksat at (907) 383-3042 or [mark.prieksat@richardson.army.mil](mailto:mark.prieksat@richardson.army.mil).



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