



Environmental Restoration News

U.S. Army Alaska

Fort Wainwright

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Operable Unit Updates

OU1

Operable Unit (OU) 1 includes the phytoremediation soils and the 801 Drum Burial Site.

over the soils, and a temporary fence was installed around the cell. Monthly inspections occurred throughout the winter to ensure that there were no problems with the cover or fence. There were no problems with the cover throughout the winter, and minor wind damage to the fence was repaired as necessary.

Based on the results of the October 2003 confirmation sampling, pesticide-impacted soils remained at the former study site. An additional soil removal event was completed in June 2004, which consisted of scraping the top 3 to 4 inches of soil from those areas of the site where soil removal was not conducted last fall. Approximately 120 cubic yards of soil was removed and placed into the new landfill cell. Confirmation sampling was performed following this excavation and showed that there is one remaining "hot spot" of contamination. A focused excavation will be conducted to remove soil in that "hot spot" area to a depth of approximately 18 inches below ground surface, the depth from which a "clean" sample was collected during a previous sampling event.



Above: Lined cell with temporary cover and fencing in place.

Left: Unrolling geomembrane material to line disposal cell.

Regrading and reseeded the landfill is scheduled to occur this summer (2004), as is the seaming of the new landfill cell.

A Cleanup Operation System Exit Strategy (CLOSES) evaluation was conducted for the 801 Drum Burial Site. The CLOSES report was reviewed by the Army, Alaska Department of Environmental Conservation (ADEC), and the Environmental Protection Agency (EPA) and finalized in April 2004. The CLOSES evaluation recommended that 8 wells be sampled every 5 years in the year prior to the 5-Year Review. ADEC and EPA agreed with this approach.

Groundwater wells were sampled in March 2004 as part of the Army's groundwater monitoring program at the 801 Drum Burial Site. The analytical results from the March 2004 sampling event indicated that concentrations of dieldrin (a type of pesticide) had decreased slightly compared to 2003 results in the two wells sampled.

The next round of sampling at the 801 Drum Burial Site is scheduled for March 2005. To support the next 5-year review, groundwater samples will be collected from all 8 wells. Some samples will be analyzed for diesel range organics (DRO), gasoline range organics (GRO), pesticides, and volatile organic compounds (VOCs). Filtered and non-filtered

samples will be collected and compared to determine if pesticides are bonding to the soil and thus affecting the groundwater concentration results.



Left: Decommissioning treatability soils for disposal in lined landfill cell.



Right: Treatability soils in the newly constructed disposal cell.



Left: Decommissioning the treatability soils and liner material.

OU2

OU2 includes the groundwater beneath the DRMO Yard and Building 1168.

Based on conclusions from the CLOSES evaluation completed on the Defense Reutilization and Marketing Office (DRMO) Yard, an augmented treatment system consisting of a larger sparge system blower is being designed for completion in Fall 2004. The Remedial Project Managers (RPMs) decided that the current air sparge/soil vapor extraction (AS/SVE) system should be taken offline until augmentation of the 3-Party System is completed.

A soil gas survey will be conducted in the DRMO-4 subarea this field season. The need for a soil gas survey was based on results of groundwater samples collected in 2003, which indicated the presence of tetrachloroethene (PCE). The survey will use a Geoprobe rig and a portable gas chromatograph (GC) to collect and analyze samples in real time, allowing for modification of the sample locations while still in the field.

Because of the contaminant levels at the DRMO Yard, it was decided to conduct an air monitoring event at Building 5010 to ensure that existing groundwater contamination is not impacting the quality of the indoor air. The resulting data from this indoor air sampling was discussed at the Federal Facilities Agreement (FFA) meeting. Since all air monitoring results were non-detect, it was recommended that no further air monitoring be conducted.

Building 1168 is ready to be “closed” from further evaluation as a 3-Party site since DRO is the only remaining contaminant of concern. The site will be sampled again in the fall, and results for possible closure procedures under the FFA and potential redelegation as a 2-Party site for the remaining DRO contamination will be discussed at the Fall 2004 FFA meeting.

3-Party sites refer to those sites that are under evaluation by the Army, ADEC, and EPA. 2-Party sites are under evaluation by the Army and ADEC. Sites considered 2-Party sites are limited to petroleum contamination, whereas 3-Party sites may have other types of contamination present.

OU3

OU3 consists of three sites: 1) Mileposts 2.7 and 3.0, 2) the Railcar Off-Loading Facility, and 3) the Birch Hill Tank Farm.

Following the removal of petroleum-contaminated soil from Mileposts 2.7 and 3.0 in 2000, the work at these source areas has generally been limited to regular groundwater monitoring. Groundwater samples are collected semi-annually, in the spring and fall of each year. In 2004, some additional work is planned at these sites: site surveys at both sites to confirm contamination is not migrating to downgradient surface water bodies and installation of additional downgradient wells at Milepost 3.0. While the semi-annual round of groundwater sampling is scheduled for Fall 2004, sampling at this site may be reduced to annual sampling in the fall only, starting in 2005. A CLOSES evaluation has also been conducted at both of these sites.

AS/SVE treatment continues in several areas of the Birch Hill Tank Farm and Railcar Off-Loading Facility (ROLF). However, three complete systems and portions of the five other systems have been shutdown after achieving remedial goals.

There are three areas of persistent groundwater contamination upgradient of the existing Central ROLF AS/SVE treatment systems. Historical groundwater data indicates that the existing systems do not extend far enough to effectively treat groundwater contaminants in these upgradient areas. In order to effectively remediate these three areas, the Army has proposed expanding the existing treatment systems. These expansions are scheduled for completion in Summer 2004.

The Army continues to conduct contaminant rebound studies at the Eight-Car Header and the Birch Hill Product Recovery System. The treatment system at the Eight-Car Header has been off since October 2002 to allow for a rebound study to support a CLOSES evaluation. Groundwater at the Eight-Car Header site was last sampled in March 2004. Benzene continues to be detected in groundwater at this site; therefore, the Army, EPA, and ADEC decided to restart a portion of the treatment system. The treatment system was restarted at the end of April 2004. The length of operation of the system will be determined following the evaluation of future groundwater sampling data. The rebound study of the Birch Hill Product Recovery System began following the shutdown of the treatment system in July 2003. Four rebound sampling events have occurred since then. It appears as if contaminant rebound continues in this area. The Army plans to continue sampling the wells in this area dependent upon the results of the rebound study.

OU4

OU4 consists of the former Fort Wainwright landfill and the Coal Storage Yard located behind the Power Plant.

Groundwater is sampled at the Fort Wainwright landfill in the spring and fall. PCE analytical results have not changed significantly since 1997.

The Coal Storage Yard treatment system is being decommissioned.

OU5

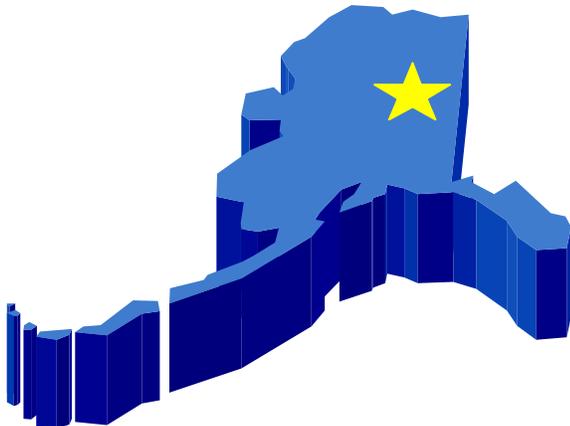
OU5 consists of two sites: the Birch Hill Tank Farm site and the Former East and West Quartermaster's Fueling System site.

The AS/SVE systems in place at the East Quartermaster and West Quartermaster Fueling Systems continue to be successful in removing contamination from groundwater. During

the May 2004 FFA meeting, the groundwater monitoring program associated with each of the systems currently in place was discussed. No changes were made to the 2004 program at this point. Samples will continue to be collected semi-annually.

The emission data for the 1060W system (in the East Quartermaster's Fueling System) indicate that the amount of VOCs the system is removing has decreased significantly from 2002. The fall groundwater data indicates that only one of the four monitoring wells associated with the 1060W system shows elevated concentrations of benzene and that the level is continuing to decrease. Data collected during the Spring 2004 event will be evaluated and presented at the next FFA meeting in regards to a possible change in system operational status.

The Army is evaluating various methods of decommissioning the horizontal well.



ACRONYMS

OU

Operable Unit

CLOSES

Cleanup Operation Systems Site Exit Strategy

ADEC

Alaska Department of Environmental Conservation

EPA

U.S. Environmental Protection Agency

DRO

Diesel range organics

GRO

Gasoline range organics

VOC

Volatile organic compounds

DRMO

Defense Reutilization and Marketing Office

RPM

Remedial Project Manager

AS/SVE

Air sparge/soil vapor extraction

PCE

Tetrachloroethene

GC

Gas chromatograph

FFA

Federal Facilities Agreement

ROLF

Railroad Off-Loading Facility

MCL

Maximum contaminant level

CRREL

Cold Regions Research and Engineering Laboratory

USACE

U.S. Army Corps of Engineers

LIF

Laser-induced fluorescence

POL

Petroleum, oil, and lubricants

NFRAP

No Further Remedial Action Planned

Two-Party Sites

The following sites are being addressed through a formal agreement between the U.S. Army and ADEC because the only contaminant of concern at these sites is petroleum, which is not monitored by EPA. The Army has and continues to work closely with ADEC to address these sites.

Building 1002

The groundwater monitoring program for this site has been reduced to sampling one well every other year. The next monitoring event for this site is currently scheduled for Summer 2005.

Building 1168

Three dry wells are scheduled to be decommissioned during Summer 2004. The groundwater monitoring program for this site has been reduced to sampling two wells every other year. The next monitoring event for this site is currently scheduled for Summer 2005.

Building 2077

An area of petroleum-contaminated soil was excavated in October 2003. The stockpile of contaminated soil from the excavation has been removed and thermally treated. A new monitoring well is scheduled for installation, and groundwater sampling is scheduled for Summer 2004.

Buildings 2111/2112

Spring groundwater sampling was conducted during the last week of April 2004. Approximately 3 inches of product was detected in one of the wells during the spring sampling effort. The Army is considering whether a product recovery skimmer should be set up for this well. An attempt was made to collect a sample of the product in order to determine what type of fuel is present in the well. It was not possible to collect a sample. The treatment system was shut down for the winter on 15 October 2003 and was restarted during the first week in May.

The Army has adopted the recommendations for 2004 operation and monitoring of this site as listed in the 2003 Annual Report. These include replacing 3 wells, discontinuing monitoring in 8 wells, decommissioning 26 wells because they are outside of the contaminated area and contamination above maximum contaminant levels (MCLs) has not been detected since monitoring began, and reduce site monitoring to an annual monitoring schedule during the fall at the end of the treatment season.

Building 2250

The Cold Regions Research and Engineering Laboratory (CRREL) and U.S. Army Corps of Engineers (USACE) conducted laser-induced fluorescence (LIF) at this site in Fall 2003 to determine the extent of contamination. Due to technical difficulties and schedule constraints with the LIF probe truck, the limits of contamination were not defined. The Army brought the LIF truck back to Fort Wainwright for more work at this site in June 2004. This work has been done, and the Army is awaiting preliminary results.

Groundwater sampling is scheduled for Summer 2004.

Neely Road POL Site

CRREL and USACE used LIF technology to complete extensive investigative work at this site to delineate the extent of petroleum, oil, and lubricants (POL) contamination below ground surface. The Army is evaluating whether to install additional wells, including one at the former waste oil underground storage tank and another well for better definition of the groundwater gradient.

Groundwater sampling and surveying are scheduled for Summer 2004.

Building 3564, North Post, Building 2060, and Buildings 2062/2063

One groundwater sampling event will be conducted at these sites during the fall (August/September) of 2004. A total of 22 existing wells will be sampled from these sites: 8 wells at Building 3564, 7 wells at North Post, and 7 wells at Buildings 2062/2063. Additionally, installing and sampling one well at Buildings 2062/2063 is planned for the 2004 field season to replace a damaged downgradient well.

A Draft Closure Plan, submitted for Building 2060 in April 2004, determined that current site conditions at Building 2060 would probably meet approval of No Further Remedial Action Planned (NFRAP) status since there have been two consecutive years of no groundwater cleanup level exceedances. However, ADEC soil cleanup levels would have to be met for consideration of complete site closure. Therefore, based on the Closure Report recommendations, groundwater samples will not be collected from this site during 2004, two soil borings will be drilled, and soil samples will be collected from suspected contaminated zones.

CLOSES Update

The draft CLOSES report for Building 2250 and the final report for the North Post site were discussed at the Fort Wainwright FFA meeting.

The draft CLOSES for Building 2250 is being formally reviewed by all parties.

Following evaluation of the CLOSES report on the North Post site and results of the Fall 2004 monitoring event, the Army may request State of Alaska concurrence with the CLOSES recommendations for monitoring frequency based on three additional monitoring events for rebound.

It was also recommended that the current AS/SVE system be left in place in case significant rebound occurs.



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