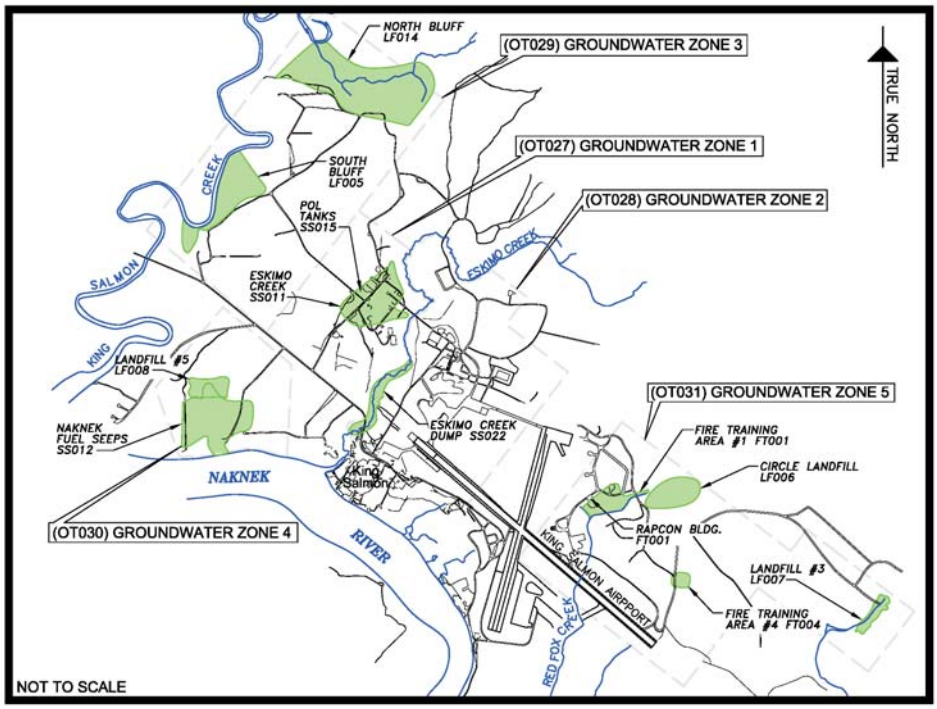
King Salmon Air Station (KSAS) - 2004 Fact Sheet

This Fact Sheet, presented by the U. S. Air Force 611th Civil Engineer Squadron and the Air Force Center for Environmental Excellence, provides information on environmental monitoring, operation, and maintenance activities performed at King Salmon Air Station in 2003-2004. The primary activities performed in 2003 and 2004 are listed below:

- A pilot study for bioventing at the main base area (Groundwater Zone 1);
- Operation and maintenance of the South Bluff and Eskimo Creek groundwater treatment systems;
- Operation and maintenance of six full-scale soil bioventing systems;
- Long-term monitoring in compliance with Records of Decision (ROD) for Zones 1, 3, 4, and 6;
- Ongoing preparation of a Proposed Plan and ROD for landfills and fire training areas (in Groundwater Zone 5);
- Landfill inspections;
- Continuation of Restoration Advisory Board (RAB) meetings; and
- Participation in the Air Force's remediation optimization program (RPO).

Results of the environmental activities are discussed in this fact sheet.



KSAS INSTALLATION RESTORATION PROGRAM SITES

Restoration Advisory Board Information:

The King Salmon Restoration Advisory Board (RAB) provides a forum for communication among community members, local government representatives, the U.S. Air Force, and regulatory agencies.

The next meeting will be held on June 15, 2004 at 7pm in the base lounge.
For more information contact David Hertzog at dave.hertzog@elmendorf.af.mil Or call him at (800) 222-4137.

OT027 - Base Living Area (Groundwater Zone 1)

Monitoring: The interim ROD for OT027 requires annual long-term monitoring. Monitoring results from 2003 show that the petroleum hydrocarbon and TCE concentrations in groundwater were generally similar to previous years' results.

Pilot Test: In the fall of 2003 and the spring of 2004, a pilot test was performed to evaluate the use of bioventing to cleanup free and residual product remaining near the water table*. Preliminary results indicate that the system is effective at remediating smear zone contamination when groundwater elevations are low in late spring through early fall. The pilot test evaluation should be completed this summer.

**In the interim ROD, free product recovery was selected for Zone 1. However, 2002 pilot study results for bioslurping indicated that there was not enough free product for feasible recovery.*

What is a ROD?

Before work at a site can proceed beyond investigation, a ROD must be signed by ADEC and the Air Force. The ROD is a formal agreement between the Air Force and the State of Alaska wherein cleanup levels, monitoring requirements, remediation timeframes, and specific restoration objectives are defined.

Remedial Process Optimization

The Air Force Remedial Process Optimization (RPO) program enlists nationwide, third-party experts to evaluate remediation strategies and identify ways to make improvements. The Air Force implemented the RPO program at KSAS in 2001, and the RPO team continues to guide KSAS remediation. Many improvements have been made to KSAS site restoration as a result of the RPO program. The RPO team will continue evaluating the KSAS treatment systems and extent of contamination in 2004; the team is planning to meet at KSAS in August 2004, along with Air Force, ADEC, and community representatives .

OT028 - Base Industrial Area (Groundwater Zone 2)

The final ROD for Zone 2 was signed by ADEC and the Air Force; long-term monitoring will begin in accordance with the ROD in summer 2004.

OT030 - Naknek River Storage Sites (Groundwater Zone 4)

The ROD for OT030 requires annual long-term monitoring in Groundwater Zone 4. Groundwater sampling results from 2003 show that natural attenuation is evident at all hydrocarbon plume sites in Groundwater Zone 4. TCE has not been detected above cleanup levels for four consecutive monitoring events (2000, 2001, 2002, and 2003). Surface water results show that petroleum hydrocarbon levels are declining in surface water.

OT031 - Landfills and Fire Training Areas (Groundwater Zone 5)

The Proposed Plan for Final Remedial Action for 8 sites in Zone 5 was distributed to the public on March 26, 2004, and a public meeting was held on April 27, 2004 to discuss the proposed cleanup actions. The final remedies proposed for the Zone 5 sites are summarized below.

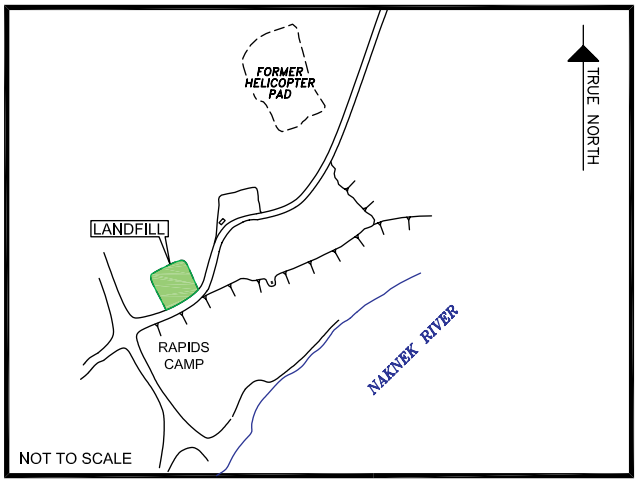
- Circle Landfill: Contaminated soil removal and treatment, and addition of vegetative soil cover as needed.
- Landfill No. 3: Institutional controls; no further response action planned (NFRAP)
- Fire Training Area No. 1: Natural attenuation of remaining contamination, with annual groundwater sampling to monitor progress.
- RAPCON: Continued operation of the bioventing system, with natural attenuation of contamination outside of the bioventing area. Annual monitoring.
- Fire Training Area No. 2 and 4: Collect soil and groundwater samples. If there is contamination above cleanup levels, it will be excavated and treated. If not, the site will be closed.
- Fire Training Area No. 3: No action; site closure.

Once all comments have been considered, the selected remedies will be documented in a ROD, which will be completed later this year.

OT029 - North and South Bluffs (Groundwater Zone 3)

Monitoring: In 2003, monitoring was performed at the North and South Bluffs in accordance with the Zone 3 ROD. Samples were collected from the shallow A-Aquifer monitoring wells and deeper B-Aquifer sentry wells (the sentry wells were installed as an early warning system to protect the drinking water supply of nearby residents). The PCB Arochlor-1260 was detected in one surface water sample from South Bluff at a concentration exceeding ADEC surface water criteria. Other 2003 sample results were generally similar to previous years' sampling results, with only iron detected above groundwater cleanup levels.

South Bluff Treatment System: The South Bluff Treatment System continues to treat groundwater before discharging it to the wetlands upgradient of King Salmon Creek. Samples are collected monthly from the treatment system influent and effluent. Usually there is no contamination above cleanup levels; however, since 2000, DRO, PCBs, heptachlor, chromium, lead, and iron have each been detected above cleanup levels in a small number of samples. Detections are sporadic and do not indicate a pattern of contamination.



RAPIDS CAMP

Naknek Recreation Camp I - Rapids Camp Landfill (LF003) Monitoring (Formerly Groundwater Zone 6)

Following the requirements of the ROD, annual long-term monitoring is being conducted in the landfill area of Rapids Camp. No contaminants were detected in samples from the 2003 Rapids Camp monitoring effort. The Rapids Camp Landfill inspections found the landfill cap to be in good condition. Monitoring to ensure that the cap remains effective is the only remaining action planned for Rapids Camp.