



December 2004

# **ALL AROUND ALASKA**

## **Air Force Environmental Update**

*"The U.S. Air Force protecting human health and the environment."*

**Environmental Hotline 1-800-222-4137**



**COMING DOWN** - One of the four antennas at the Big Mountain Radio Relay Site falls to the ground during building demolition this summer. All buildings and antennas were demolished under Air Force project "Clean Sweep." For more information on the Big Mountain RRS demolition see page 4.



**Produced By:**  
**611th Civil Engineer Squadron,**  
**Environmental Restoration Program**  
**Elmendorf AFB, Alaska**



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**BACKGROUND-**  
F-15C, 19 Fighter Squadron, 3rd Wing

Eareckson AS

Driftwood Bay

Cold Bay

Nikolski

Port Moller

Port Heiden

King Salmon

Cape Newenham

Big Mountain

Pillar Mountain

Elmendorf AFB

Sparrevohn

Bethel

Lake Louise

Tatlina

Cape Romanzof

Beaver Creek

Kalakaket Cr

Bear Creek

Name Tank Farm

North River

Murphy Dome

Campion

Galena

Indian Mtn

Fort Yukon

Tin City

Anvil Mtn

Granite Mtn

Cape Lisburne

Point Lay

Wainwright

Point Lonely

Oliktok

Bullen Point

Barter Island

Barrow



## AIR FORCE ENVIRONMENTAL CLEANUP

The 611th Civil Engineer Squadron's environmental cleanup of military sites in Alaska is one of the largest environmental cleanup programs in the Department of Defense. The 611th CES is responsible for environmental cleanup and building demolition at 40 installations across Alaska. At those locations 458 contaminated sites have been identified that require environmental cleanup. Approximately \$20 million is spent annually on environmental cleanup.



### Big Mountain RRS clean up progressing smoothly

By Mike Rhoads  
Project Manager

Big Mountain Radio Relay Station (RRS) is an abandoned Air Force station on the south shore of Lake Iliamna. The installation was deactivated in the early 1970s and is now part of the Air Force Clean Sweep program. During the last few years the Air Force has been engaged in the clean up of Big Mountain RRS. Multiple studies were done to determine the degree and extent of contamination at sites at the installation in order to plan for the clean up. In addition, for the last two years the Air Force has been in the process of preparing the site for demolition of the old abandoned buildings.

During the first year, 2003 the buildings and the site were prepared for demolition. The runway was repaired to facilitate movement of personnel and equipment, and an on-site landfill was constructed for placement of the demolition debris. Initial clean up included off-site disposal of hazardous waste, and abatement of all friable asbestos from the buildings. In 2004 the Air Force demolished the buildings and placed the non-hazardous debris in the on-site landfill.

Big Mountain RRS is now ready for the clean up of petroleum contamination remaining at the site. Proposed Plans for clean up will be completed in the fall of 2004 with clean up beginning in the summer of 2005. The Air Force plans to treat the petroleum



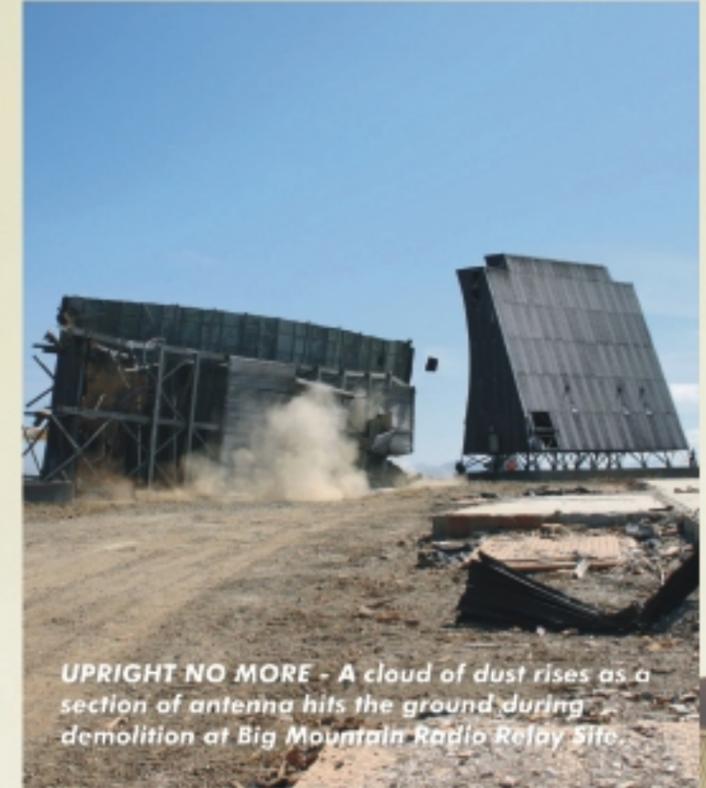
**BIG EQUIPMENT** An excavator loads building debris into a truck at Big Mountain RRS.



contaminated soil with low temperature thermal desorption (dig it up and burn the petroleum out of the soil). The Air Force also plans to clean up PCB contaminated soil by excavation and off site disposal to a permitted PCB disposal facility in the Lower 48.

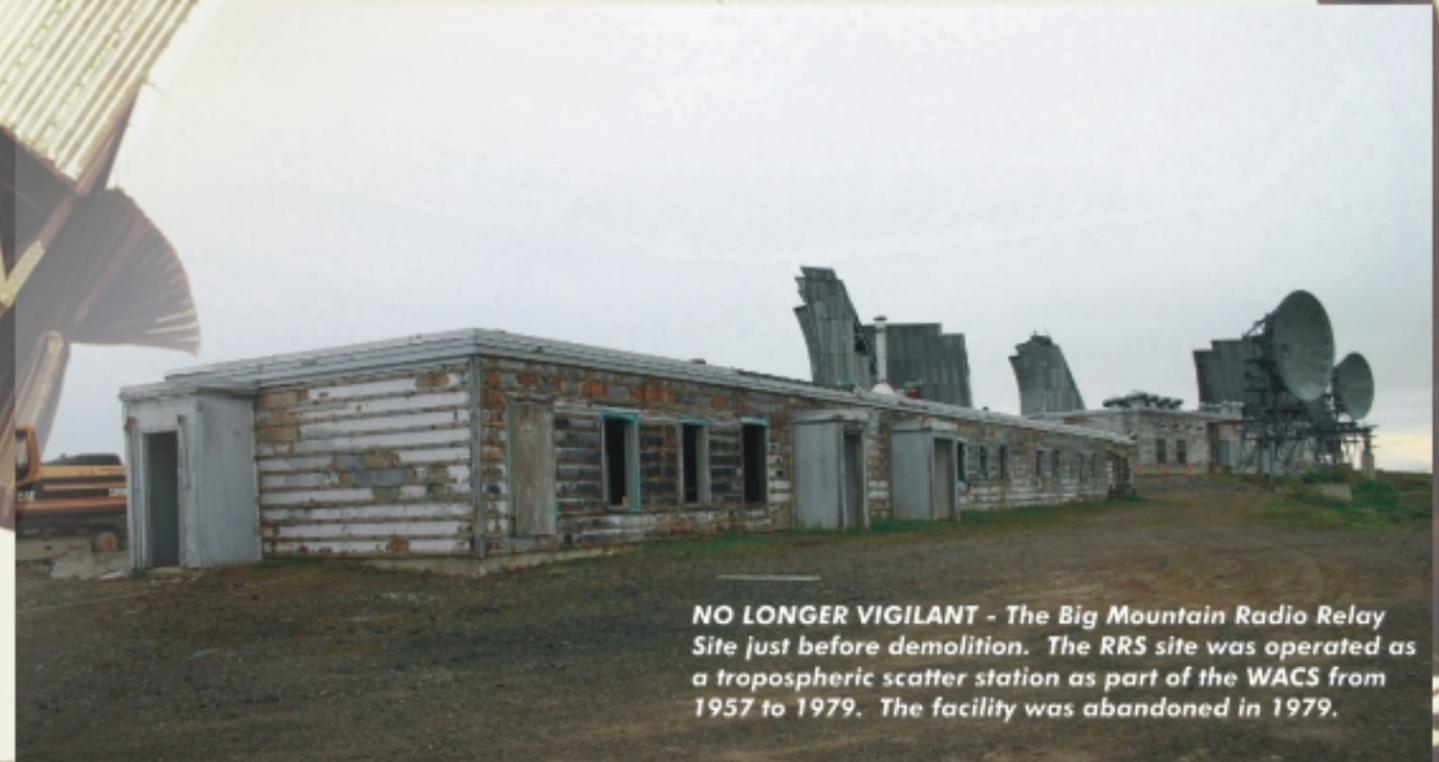
After the 2005 clean up activities are completed at Big Mountain RRS the only remaining clean up activities will be long term monitoring of the groundwater at the lower camp area. It is anticipated that once the contaminated soil is removed the groundwater will clean up over time. The ongoing monitoring will confirm when the groundwater is clean.

When Big Mountain RRS is considered environmentally clean the Air Force will dispose of the site through the Bureau of Land Management. BLM will act to sort out any conflicting claims on the property (Lake and Peninsula Bureau, tribal claims, State of Alaska or local tribal allotment, etc.) and to act as the real estate agent for the government.



**UPRIGHT NO MORE** - A cloud of dust rises as a section of antenna hits the ground during demolition at Big Mountain Radio Relay Site.

**HIGH ON A MOUNTAIN TOP** - The Big Mountain Radio Relay Site was constructed in 1956 as part of the White Alice Communications System. The 451-acre site is located on the south shore of Lake Iliamna.



**NO LONGER VIGILANT** - The Big Mountain Radio Relay Site just before demolition. The RRS site was operated as a tropospheric scatter station as part of the WACS from 1957 to 1979. The facility was abandoned in 1979.



## Air Force saves Alaska native remains from winter storms

By Master Sgt. Tim Hoffman  
Alaskan Command Public Affairs

ELMENDORF AIR FORCE BASE, Alaska --Quick action and the use of high-tech radar allowed the Air Force to find 15 unmarked Alaska native graves at an old radar site that were in danger of being washed out to sea last winter.

Late last year, the rural village of Port Heiden, Alaska, saw their old graveyard get torn apart by a winter storm.

"The first big wave took out the cross that marked the grave, and the second took the coffin out to sea," said Gerda Kosbruk, the village administrator for Port Heiden. She and the other 100 or so members of this traditional Alutiiq community watched as six gravesites in the old town cemetery were washed out into Bristol Bay by a storm in late November. The savage storms and high tides of the Bering Sea had forced the village to relocate in the early 1980s several miles inland, but the old cemetery along the ocean bluffs had never been relocated.

Now, a winter storm and high tide forced the residents of this remote village to spend their Thanksgiving Day moving remains from the old cemetery that were still in danger of being washed away.

"It was traumatic for all of us," said Lynn Carlson, Mayor of Port Heiden. "It was a job no one wanted to do, but we had to do. We relocated all the remains to the new town cemetery."



**ABOVE  
RADAR SCREENING** -- Tom Donley, 611th Civil Engineering Squadron (center) Environmental Flight, reads the screen on the ground penetrating radar as Annie Clinton, a forensic anthropologist, writes down notes from the readings. Local Port Heiden resident (left) Jimmy Christensen, like many residents, were interested in how the Air Force went about finding unmarked grave sites. (Photo by Capt. KayLynn Meeker)

**LEFT  
TAKING AN INTEREST** - Students from Port Heiden took a field trip and learned how the ground penetrating radar system identified gravesites. Conducting the field trip for the students was Capt. KayLynn Meeker, planning chief with the 611th Civil Engineering Squadron at Elmendorf AFB.



The village is only accessible by a gravel airstrip or by water in the summer. So no one could help them with the task. They did it on their own using "a dozer, shovels, rakes whatever we could find," said Ms. Carlson.

Residents were also concerned about another cemetery and a possible mass gravesite that was thought to be located on an old Air Force radar site about a quarter mile down the coast.

"We had to move fast," said Maj. Marc Hewett, 611th Civil Engineering Squadron, Environmental Flight Commander. "They were predicting another 24-foot high tide right before Christmas and we were not sure where or how many graves might be there. There were no written records, only the oral history of the village."

"My great grandpa told me of the Spanish flu epidemic around 1918," said Ms. Kosbruk. "He talked about how he froze his feet helping bury everyone. No one kept an exact count, but there is said to be a mass grave of 200 people some where on or near the Air Force site."

The Air Force had an on-going history project for several years on the cemetery before this crisis and found territorial records showing 21 people died of the Spanish influenza. So they knew they were looking for a mass grave, they just didn't know exactly how many remains would be found in it.

To speed the process of finding the gravesites the Air Force brought in two contract forensic archeologists and a new ground penetrating radar to supplement their in-house staff.

"There was an old chapel on the site, so that was the logical starting point," said Major Hewett.

The Air Force team arrived Dec. 17 and by Dec. 23, 2003 they had found eight sets of remains.

"The ground penetrating radar was a great tool," said Karlene Leeper, 611th CES, cultural resources program manager. "It wouldn't necessarily show a gravesite on the display screen, but it would give indications of previous ground disturbances and a better idea where to dig."

The radar sat on a baby carriage-sized platform and took an image just a foot or two wide and about eight feet deep. "The only other way to search is to dig test excavations, which is not the most efficient method in this type of environment," said Ms. Leeper.

The area usually has mild winters, but not this year. The team had to battle cold temperatures and strong winds that combined to send the wind-chill to minus 45. Plus, several large packs of wolves, sum numbering up to 30, had been reported by Port Heiden residents. Luckily, none were seen, but the howling coastal wind did take a toll.

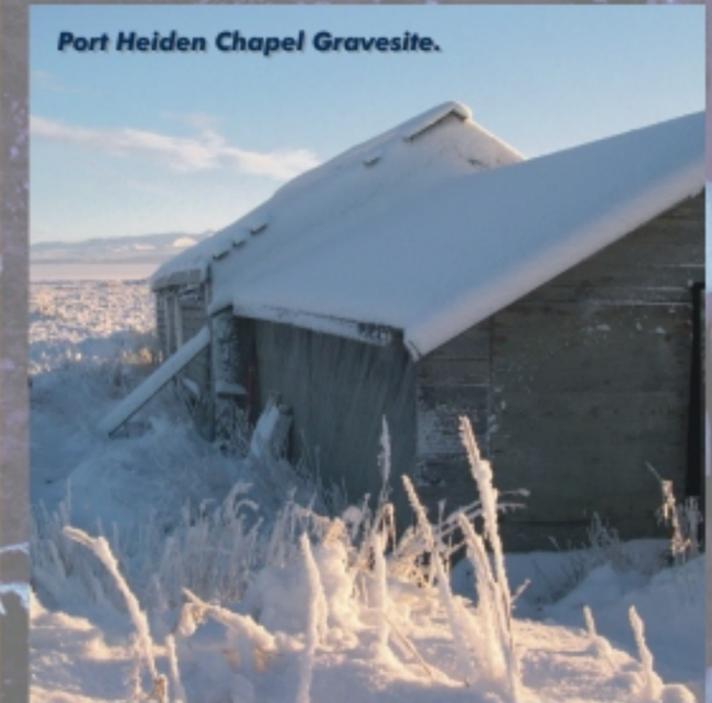
"We had to take breaks every 45 minutes," said Ms. Leeper. "We tried to warm up the best we could, but with only six hours of daylight we didn't want to waste too much time. Thankfully, everyday someone from the village checked on us and always brought something to eat or drink coffee cake, soup, it was wonderful. Their support was tremendous."

The Air Force team, confident it had found all the sites near the bluffs went back to Elmendorf for Christmas. They came back Jan. 5 and exhumed seven more sets of remains, but found no mass gravesite. After searching nearly a square acre, their efforts were considered complete on Jan. 11. All the remains were put in simple coffins and turned over to the village for reburial.

On July 11, 2004, the Air Force team returned to Port Heiden to complete the excavation of the cemetery on Air Force lands that the team was unable to excavate during the winter. The team located the mass grave and the remains were removed and re-buried at the new gravesite.

"We appreciate their efforts and their constant communication with us," said Ms. Carlson. "They consulted us and kept us informed. They even took the time to give a demonstration of the ground penetrating radar to the high school students and explained their project to them. Sometimes it's hard to get government agencies to act at all, let alone act as fast as the Air Force did. So we all thank them for their efforts to help."

Port Heiden Chapel Gravesite.





## Agvia, LLC, Tikigaq Corporation Subsidiary Cleans Air Force Installation

Above the Arctic Circle on the coastline of the Chukchi Sea and perched on the jagged cliffs of Cape Lisburne, the Air Force operates the Cape Lisburne Long Range Radar Site (LRRS).

On the same coastline 35 miles southwest of Cape Lisburne is the Native Village of Point Hope, Alaska (Point Hope). Point Hope community members know Cape Lisburne as Uivvaq, as they have been boating to Uivvaq for generations to conduct hunting and subsistence activities within the game and wild food rich area. Because historical contamination generated by the Cape Lisburne LRRS is in proximity of Uivvaq subsistence activities, a Restoration Advisory Board was developed in Point Hope with the ultimate goal of developing an environmental cleanup program that will better address community concerns over subsistence resources.

During the summer of 2004, the Air Force, through the Air Force Center for Environmental Excellence (AFCEE), contracted AGVIQ, LLC - a subsidiary of the Tikigaq Corporation of Point Hope, to remove approximately 7,000 cubic yards of contaminated soil from several locations at Cape Lisburne, Alaska. The soil contaminants included fuel, oil, polychlorinated biphenyls (PCBs), and solvents.



**HEAVY LOAD** A 35-ton forklift lifts a 12-ton super sack filled with contaminated soil into a metal container.



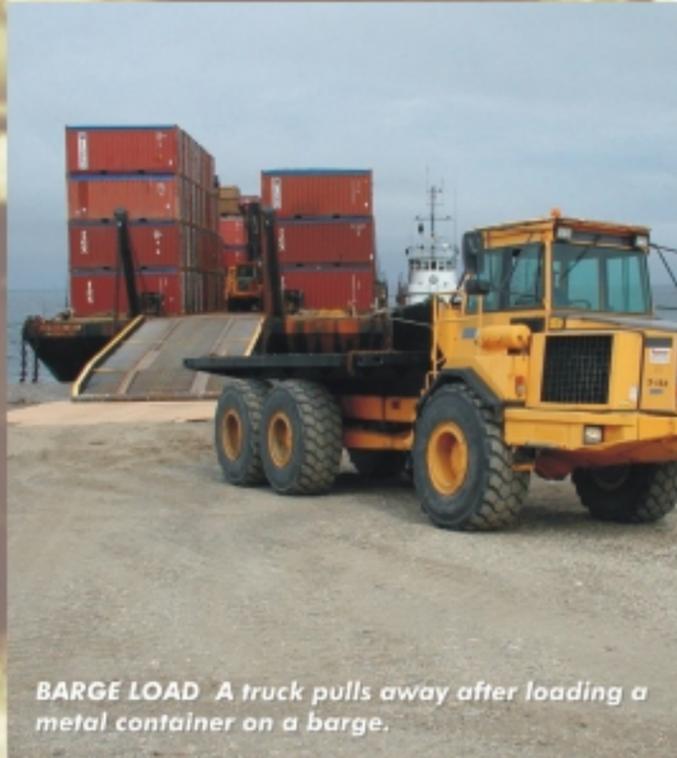
**PASSING BY** - Caribou pass by as an excavator digs up petroleum-contaminated soil at Cape Lisburne.

In June 2004, AGVIQ equipment and a camp were mobilized to Cape Lisburne. In mid-July, excavation began. The AGVIQ crew consisted of 18 people, including 5 Tikigaq (Point Hope) shareholders, and 1 each shareholders of NANA, ASRC, Koniag, and CIRI.

Much of the work required the use of heavy equipment. The crew operated two excavators, two loaders, three articulated off-road trucks, two tractor-trailers, and a 35-ton forklift. Up to 9,500 tons of contaminated soil was placed into 20' open-top containers or 12-ton super-sacks. A total of 302 open-top containers and 467 super-sacks were filled and loaded onto barges for shipment to disposal/treatment facilities in the lower 48.

In addition to contaminated soil, AGVIQ also recovered approximately 500 buried drums with 15 of the drums containing contaminated liquids other than water. These drums were over-packed and sent with the barge to a treatment/disposal facility. Empty drums were cleaned/crushed and transported to the active Cape Lisburne LRRS permitted solid waste landfill.

The ultimate accomplishment after working long hours every day for 8 weeks, in good weather and bad, with bears in the vicinity, was that no accidents or injuries occurred during the entire project.



**BARGE LOAD** A truck pulls away after loading a metal container on a barge.





## Cold Bay soil treatment progressing smoothly, on schedule

During the 2002 and 2003 field seasons, the United States Air Force (USAF) continued cleanup activities near the former Cold Bay Long Range Radar Site (LRRS). The goal of these activities was to continue cleanup at the POL Storage Area (ST005) and the former White Alice Communication System (OT001), as outlined in the declarations of decision for these sites.

In 2002, work at ST005 included relocation of an existing soil stockpile (containing soil from OT001), construction of a stockpile of contaminated soil that was to be treated in 2003, and collection of surface soil samples. Soil samples were obtained from down gradient of the former OT001 stockpile location and at the location where the thermal desorption unit (TDU) was to be installed in 2003. In 2003, surface soil samples were collected at the former stockpile locations, former transportation routes, and the location of the TDU pad.

Test pits were excavated in an effort to investigate the extent of subsurface contamination to be removed and treated. As contaminated soil was excavated, additional soil samples were obtained from the excavation. Results of screening and analysis were used to determine the soil that had to be treated. As soil was treated and stockpiled, samples of treated soil were obtained. As laboratory analysis confirmed the



**POL AREA DURING CLEANUP** Heavy equipment and piles of soil dominated the site during soil treatment at the former petroleum, oils and lubricants storage area.

treated soil contained no more than 250 milligrams per kilogram (mg/kg) of diesel-range organic (DRO) contamination, soil was placed back in the excavation.

More than 11,800 tons of soil (from ST005 and OT001) was thermally treated. All excavations were backfilled with treated soil. After backfilling was completed, the site was re-graded and reseeded. Two 17,000-gallon tanks and one smaller tank were emptied and prepared for shipment off site. Approximately 2,030 gallons of fuel-contaminated water was treated, and a 4-inch diesel fuel pipeline was drained and sealed. Four monitoring wells were installed, an existing well was repaired, and groundwater samples were obtained.

Fieldwork at the OT001 site in 2002 included collection of soil samples from the former surface impoundment and stockpile areas, backfilling the surface impoundment and sinkholes, and collection of subsurface soil samples to define the extent of contamination within the former underground storage tank (UST) excavation area. In 2003, approximately 70 cubic yards of contaminated soil was excavated and thermally treated, four monitoring wells were installed and sampled, and the site was re-graded and reseeded.



**POL AREA TREATMENT COMPLETE**  
The Cold Bay petroleum, oils and lubricants storage area after excavation and soil treatment was completed.



**WELL INSTALLATION** A drill rig crew installs a well at the former Cold Bay White Alice Communication System.

Results of analysis of soil samples from OT001 and ST005, confirm that soil, between the ground surface and 15 feet below ground surface, meets the cleanup standard at both sites. Groundwater samples collected from OT001 did not contain DRO contamination above site-specific cleanup levels. In accordance with the Declaration of Decision, annual inspections of OT001 will continue through 2006. One groundwater sample from ST005 contained benzene (0.0081 micrograms per liter) in excess of the level (0.005 micrograms per liter) prescribed by 18 Alaska Administrative Code (AAC) 75.345. The available data indicates that this benzene originated off site. DRO was present in a down gradient well at the ST005 site at a concentration above the site cleanup level. Additional groundwater sampling is planned at OT001 and ST005. Groundwater monitoring will continue until two consecutive rounds of sampling and analysis indicate that DRO concentrations are below the cleanup level.



## CONTRACTORS TEAM-UP TO FACILITATE GALENA CLEANUP

A team of contractors selected by the Air Force is completing a Remedial Investigation/Feasibility Study at Galena Airport and former Campion Air Station, in Galena, Alaska. The current activities will determine which sites can be closed without any further investigation or clean up activities and which sites require additional clean up prior to closure. Sites have been impacted with fuel-related contaminants during Air Force operations over the past 50 years, mostly in the 1950s and 1960s prior to environmental regulations.

A technical project team (TPT) was formed w/Alaska Department of Environmental Conservation Project Manager, Air Force Project Manager, Loudon Tribal Council (three members), Galena City Manager and Galena City School Principal. Prior to sampling, the team evaluated all information from previous studies and concluded that several of the sites at the facility could be closed with no long-term monitoring needed. Of the remaining sites, several only needed a few samples to resolve potential impacts to groundwater. A few sites needed more information, and these have been sampled over the past year to delineate soil and groundwater contamination and to test specific remedial/cleanup technologies. These recommendations will be formally adopted in a Decision Document expected to be issued late in 2005.



**ABOVE**  
**WELL SAMPLING** - At Campion workers sample a well for petroleum products.

**LEFT**  
**DRILLING TEST WELLS** - A drill rig crew from Discovery Drilling drills test wells to check for petroleum products at the Galena Airport POL tank farm area.

**RIGHT**  
**CHECKING CLOSELY** - Patrick Hass of Mitre Tek monitors progress of the drill rig sampling for petroleum products at the Galena Airport POL tank farm area.

**BACKGROUND**  
**Historical aerial photo of Galena.**



The team of contractors performing this work includes Earth Tech, inc., a USAF contractor with offices nationwide; Oasis Environmental, an Alaska-based small business; and Yukaana Development Corporation, a native-owned, woman-owned, small business based in Galena, Alaska. This partnership yields a team with experience working on complex Air Force projects, familiarity with both US Environmental Protection Agency (EPA) and Alaska Department of Environmental Conservation (ADEC) regulations, and with a local presence that provides the government a cost-effective solution for getting the work done.

The project included training Yukaana technical staff in sample collection and remediation monitoring techniques, which has allowed them to secure a follow-on contract directly with the Air Force to continue monitoring and sampling until the summer of 2005, and probably into the future.

To execute this future work and provide the best value to the government, Yukaana has teamed with Bethel Native Corporation and Oasis Environmental, creating a competent all-Alaskan project team to benefit the Air

Force and the community of Galena. The Galena and Campion projects will serve as a model for Air Force contracting in the future, where the work is performed at a high quality level, utilizing the extensive experience of lower 48 contractors, while increasing the skill level of Alaska based firms.

The sampling of indoor air, extracted soil vapors, soil, and groundwater will provide information, which will allow the team to recommend and design remedial systems to address the problems fully.

In addition to the contractors listed above, the Air Force contracted with MitreTek Systems, Inc., to provide oversight and review of all the project activities. MitreTek employs experts in the field of environmental investigation and remediation, who bring substantial experience and additional ideas to the table.





## AIR FORCE RESPONDS QUICKLY TO UNALAKLEET PCB CONTAMINATION

On July 9, 2003, the U.S. Air Force was notified by a Native allotment owner at Unalakleet that she suspected there was contaminated soil in the middle of an access road leading to her property. Air Force cleanup personnel, who were in the area at that time removing old abandoned military drums and sampling soil near the former North River Radio Relay Site, responded to the contamination report.

On July 10, 2003, the Air Force workers confirmed high levels of polychlorinated biphenyls (PCB) in the soil at the suspected area. It appears the actual spillage occurred quite a few years ago and was related to drums that were stored or disposed of in the area. Preliminary results from sampling of the soil in the access road show PCB concentrations exceeding 30,000 milligrams per kilograms (mg/kg) in an approximate 10 by 20 foot source area. The PCB contamination had apparently been spread across the trail leading to the Native allotment by vehicle and foot traffic. Sampling completed in September 2003 showed that PCBs had been tracked to a nearby cabin on the allotment.

Members of the Alaska Department of Environmental Conservation (ADEC) continue to work with the Air Force to minimize PCB exposure to people and animals until the site is completely cleaned up. The U.S.



**ABOVE**  
**PROTECTIVE COVER** - An impermeable liner covers a section of road that has PCB contamination. The liner was then covered with gravel. The contaminated soil was removed in 2004.

**LEFT**  
**LABELING DRUMS** - Larry Pellegrino (left) and John Cooper of the 611<sup>th</sup> Civil Engineer Squadron's Environmental Operations Section, label and seal drums containing PCB contaminated soil. Twenty-five 85-gallon drums and twenty-five 55-gallon drums weighing more than 31,000 pounds were shipped to Elmendorf Air Force Base for disposal.

**BACKGROUND** - Norton Sound as seen from the road to the North River site.



Environmental Protection Agency (EPA) has been consulted for guidance on sampling techniques. ADEC requested that the Air Force perform the cleanup as quickly as possible and the Air Force initiated a time critical response to the PCB contamination.

The Air Force completed its initial PCB assessment and interim removal action in late September 2003. Approximately 31,530 pounds of the PCB source area was removed and shipped off site for disposal. Additional sampling identified lower levels of PCBs, under 50 parts per million (PPM), on the trail, vegetation and adjoining road.

Protective barriers, liners, and fencing were installed on and around these areas as interim protective measures. Heavy snow and Arctic weather conditions have isolated the PCB affected areas since mid October 2003.

On October 1, 2003, 26 Unalakleet area residents were medically screened for PCB exposure. The laboratory results were all negative, no excessive PCB exposures were detected. Biological sampling of area subsistence birds was conducted in January and February 2004. These laboratory results were also negative.

The Air Force's 2003 interim removal action field report was approved by ADEC and finalized in February 2004. The second draft of the 2004 Time Critical Removal Work Plan was distributed to ADEC, EPA, and community members for review on March 22, 2004. Input from tribal and community members were carefully considered.

The cleanup actions continued in early June 2004 after spring thaw. All operations were conducted in accordance with ADEC and EPA approved guidelines.

The Air Force will remove the PCB contaminated areas to within the ADEC residential cleanup standard of one PPM.

As the 2004 removal action proceeded, it was realized that there was more contaminated soil at the site than estimated. All of the removal could not be completed during the second removal action. The soil that could not be removed is more than 5-feet below the ground surface or is covered by a protective fabric.

The Air Force is developing plans to remove the remaining PCB contaminated soil. Depending on funding, the project could be completed as early as 2005.



**NORTH RIVER RADIO RELAY STATION** - Was constructed in 1956/57 as one of 31 original White Alice Communications System facilities and became active in 1957. The RRS was a combined tropospheric scatter microwave station, which relayed radio information. The 216-acre facility was closed in 1978 and demolished in 1995/96.



**FENCED** - A chain link fence was erected to prevent people and animals from exposure to the PCB contaminated area.



## PORT HEIDEN COMMUNITY MEMBERS ATTEND ENVIRONMENTAL AWARENESS SEMINAR

Weston Solutions, Inc. (WESTON) conducted an Environmental Awareness Seminar for the Village of Port Heiden April 6-8, 2004. The training was focused on providing interested tribal and community members with an understanding of the regulatory, administrative and technical framework under which the Air Force conducted Remedial Investigation / Feasibility Study (RI/FS) activities at the site this year.

In addition, the seminar included sufficient safety awareness training such that it qualified the participants to receive 8-hour refresher certification for their OSHA Hazardous Waste Operators training. In the spirit of cooperation, the training was arranged through the involvement of the community, the Air Force, the Alaska Department of Environmental Conservation (ADEC) and Weston. Port Heiden community members who participated in the training were: Alvin C. Matson, Macarlo Christiansen, Edward Odomin, Walter Nudlash, Scott Anderson, Delores K. Anderson, Eli Weketa, and Bob Christiansen.

The trainers were: Scott Blount, Weston Solutions, Inc. - Primary Instructor; Russ Beck, Weston Solutions, Inc. - Instructor for Planned RI/FS activities; Mike Stuart, Weston Solutions, Inc. - Safety Instructor; and Lindsey Smith - ADEC Oversight, Risk Evaluation and Regulatory

### Support.

The three-day training seminar was filled with viable and relevant material regarding environmental restoration.

Day one of the seminar focused on an introduction to the development and execution of the regulations which will govern activities at the site, including Resource Conservation and Recovery Act; Comprehensive Environmental Response, Compensation, and Liability Act; Superfund Amendments and Reauthorization Act; and Toxic Substances Control Act. The relationship between these acts was discussed, as well as the roles of the various governmental agencies (the Air Force, ADEC, the United States Environmental Protection Agency, et.) and the role of the community in their enforcement and application. The functions and authorities of each agency were explained, as well as the origin, timing, and flow of cleanup funding. Specific regulations that address contamination and waste disposal were discussed and explained.

Day one training also addressed the National Contingency Plan (NCP) and its relationship to the Installation Restoration Program. Elements of the NCP (Preliminary Assessment / Site Investigation, Hazard



Ranking System Evaluation, listing a site on the National Priorities List and the Remedial Investigation planning process) were addressed in detail. Strong emphasis was placed on the explanation of common acronyms. Finally, the first installment of the safety refresher was also conducted.

Day two of the seminar focused primarily on activities that were to be accomplished at the site this summer. Field logistics, including safety, communication, transportation, etc., were discussed. Demonstrations of various pieces of field equipment were conducted (PID and water quality meter), as well as a demonstration of a field sampling kit for fuels using "spiked" demonstration samples. Site maps were used to describe where different activities would be conducted. The community was encouraged to tell us where subsistence activities occur which might have the potential for being affected by the former Air Force site. "New" sites of potential concern to the community were discussed. The overlap between Army sites and Air Force sites at Port Heiden were briefed in detail regarding these sites of interest.

Day two discussions also addressed the different techniques used to collect samples, the typical contaminants expected, and Applicable and Relevant and Appropriate Requirements (ARARs), as well as specific cleanup levels for key compounds such as

diesel range organics and gasoline range organics. Items such as sample custody and quality control, decontamination, detection limits, method reporting units, etc., were explained. Again, strong emphasis was placed on the explanation of common acronyms. Finally, the second installment of the safety refresher, primarily field safety, was also conducted.

Day three of the seminar primarily addressed data evaluation and reporting. Questions on the risk assessment process were addressed. Items covered included a description of the remedial investigation reporting process, including modeling of the data, data management, data quality, and the presentation of "plumes" and other contaminant data on maps. The details of the feasibility study process were discussed, including a description of the various remedial strategies typically employed. Timing of the remedial process with regard to CERCLA and the Port Heiden schedule were addressed. Elements of the Proposed Plan and the Record of Decision processes were described, highlighting community involvement in each. Day three concluded with a review of the safety discussions to date (a review "test") and a question and answer session.



**LEFT**  
**ENVIRONMENTAL INSTRUCTION** – Port Heiden community members listen closely to Scott Blount (center), primary instructor, during the three-day environmental awareness seminar.

**BACKGROUND**  
**Port Heiden**





## Cultural Resources busy with multiple plans, programs

By Karlene Leeper  
Cultural Resources Manager

This was a busy year for cultural resources at the 611<sup>th</sup> Civil Engineer Squadron (CES). The following are some highlights and plans for 2005:

### Integrated Cultural Resources Management Plans (ICRMP)

This year, the 611 CES Cultural Resources Program completed updated ICRMPs for Eareckson Air Station and the former Aircraft Control and Warning (AC&W) radar sites, which now function as Long Range Radar Sites in interior and west coastal Alaska. The University of Colorado's Center for Environmental Management of Military Lands assisted with the plans. In 2005, the 611 CES plans to update Integrated Cultural Resource Management Plans ICRMPs for former Distant Early Warning (DEW) sites along Alaska's north coast and the Forward Operating locations at King Salmon and Galena.

### Archaeology Exhibits

The 611 CES installed new exhibits highlighting the history of Inupiat people who lived in the locales of the Tin City and Cape Lisburne Long Range Radar Sites. The exhibits are located at the schools at Wales and Point Hope. University of Alaska's Environment and Natural Resources Institute lead the archaeology project and created the exhibit about Tin City at Wales.

Geoarch Alaska and Aglaq/Conam, JV conducted the archaeology project and produced the Cape Lisburne/Uivvaq exhibit at Tikigaq School, Point Hope.

### Distant Early Warning (DEW) Line History and Clean Sweep:

The 611 CES is writing and implementing a Memorandum of Agreement (MOA) under section 106 of the National Historic Preservation Act with the Alaska State Historic Preservation Officer and others. This MOA will explain how the history will be recorded and preserved to mitigate effects of the Clean Sweep environmental remediation and demolition program on seven historic Cold War radar sites. The 611 CES received a Legacy Grant and is partnering with the Inupiat History Language and Culture Commission (IHLC) to record the oral history of North Slope residents who worked at and lived near the sites through the Cold War days. The Legacy Project, IHLC will also record and organize information on Traditional Cultural Sites in close proximity to the radar sites. Historians are compiling an annotated bibliography and study guide to help researchers who are interested in the history of the DEW system.



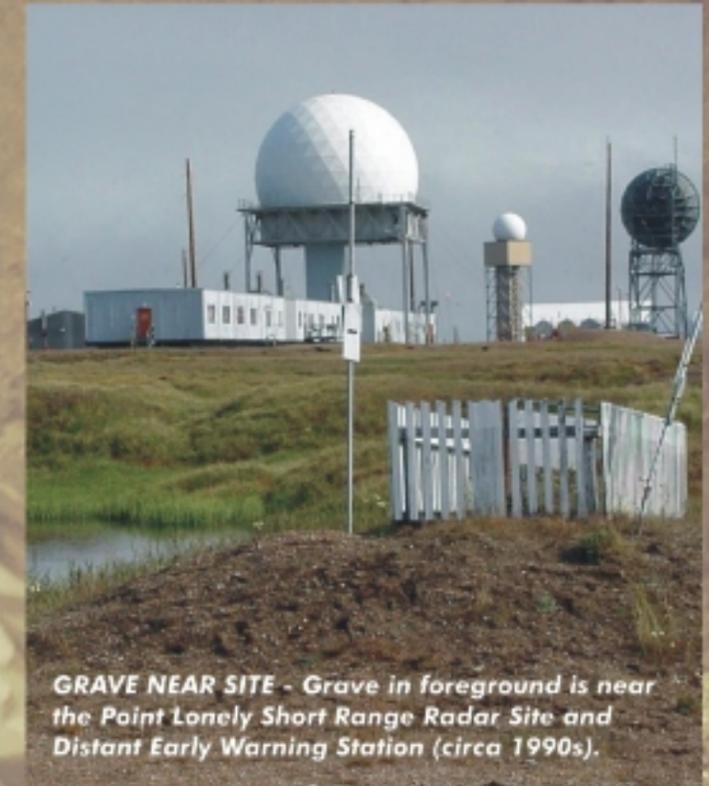
### Port Heiden Cemetery Project

In December 2004, the Port Heiden Native Council asked for assistance in moving a 1919 flu epidemic cemetery that was in imminent danger of erosion into Bristol Bay. Many people from the 611 CES environmental flight assisted in locating, excavating and transferring 36 sets of human remains to the Native Council of Port Heiden for reburial at an inland location.

### Eareckson Air Station Archaeology Project

During the summer of 2002, workers who were upgrading the Air Station's sewer system uncovered a previously undiscovered archaeological site in the residence and operations area in the interior of Shemya Island. Archaeologists from the United States Fish and Wildlife Service hope to further investigate the site during in 2005.

If you would like copies of ICRMPs and other publications, or, are interested in more information, or to comment on any of the projects listed above, please contact Karlene Leeper, Cultural Resources Manager for the 611 CES at 907-552-5057, or [karlene.leeper@elmendorf.af.mil](mailto:karlene.leeper@elmendorf.af.mil).



**GRAVE NEAR SITE** - Grave in foreground is near the Point Lonely Short Range Radar Site and Distant Early Warning Station (circa 1990s).



**ARCHAEOLOGICAL PROFILE** - Diane Hanson, archaeologist with the Army Corp of Engineers Alaska District, examines the archaeological soil profile near Building 613 at Eareckson Air Station.



**UNDER THE LIGHTS** - Karlene Leeper, cultural resources manager with the 611<sup>th</sup> Civil Engineer Squadron, and Margie Goatley and Annie Clinton of the Alaska Office of History and Archaeology, work under the lights December 21, 2003 (Winter Solstice) on the Port Heiden Graves Project.



## ENVIRONMENTAL RESTORATION EFFORTS ON-GOING AT KING SALMON AIRPORT (KSA)

Since 1987, the Air Force has been engaged in cleanup operations at KSA under the Installation Restoration Program (IRP), the Air Force equivalent of the Environmental Protection Agency's Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) program. The IRP provides guidelines and funding to investigate and remediate potentially contaminated sites at Air Force installations.

### Remedial Process Optimization Program

To accelerate the progress of restoration efforts at KSA, the Air Force implemented a Remedial Process Optimization (RPO) program in 2001. The RPO program enlists a team of third party experts to evaluate remedial technologies and strategies currently being used at the sites, and to recommend improvements.

Since 2001, the RPO team has recommended over 178 improvements to restoration strategies at KSA sites. The RPO team met again with Air Force, ADEC, and EPA representatives this fall to make additional recommendations to existing efforts as part of the basewide five-year review process.

### Recent Site Restoration Progress

Multiple sites and Groundwater Zones at KSA are actively being cleaned up, and are at various stages of the IRP process. The Air Force has made significant progress in restoring sites basewide over the past 17 years. Most of the KSA Records of Decision (RODs) for individual sites have been formalized, and cleanup is underway.

### Zone 1 Groundwater Restoration and Site Cleanup

The Interim Zone 1 ROD (December, 2000) requires treatment of free petroleum product and long term monitoring (LTM) of trichloroethylene (TCE) in Zone 1 groundwater. A remedy for dissolved petroleum hydrocarbons will be documented in a Final ROD after product removal or remediation has been sufficiently addressed.

Recent monitoring results indicate that contaminants in Zone 1 groundwater are stable, with TCE concentrations decreasing in the most highly contaminated portions of the groundwater plume.

### Zone 2 Groundwater Restoration and Site Cleanup

Monitored Natural Attenuation (MNA) has been identified in a recently signed ROD (November 2003) as the preferred restoration method for groundwater contaminants. As part of this action, LTM activities began in 2004 and the site reevaluated every 5 years until cleanup levels are achieved.

### Bluffs (Zone 3) Monitoring

In accordance with restoration requirements documented in the Bluffs ROD (June 2000), the Air Force monitors groundwater and surface water annually. Sediment samples are collected every five years, with the latest sampling event conducted this year. The 2003 monitoring results for A-Aquifer groundwater were similar to previous years, with few exceptions. The only B-Aquifer exceedences identified in the sentry wells have been for metals and are suspected to be naturally occurring background.

### Zone 4 Groundwater Cleanup

MNA with annual LTM was the groundwater restoration method approved in the Zone 4 ROD (June, 1999). Free product recovery is also part of the Zone 4 requirements. The Zone 4 MNA groundwater remediation is part of a National Natural Attenuation Study for the EPA and the Air Force. Preliminary 2003 LTM results show that natural attenuation is evident in groundwater, which indicates that MNA can work in cold climates.

Petroleum hydrocarbon contaminants continue to show declining concentrations, and TCE has not been detected above groundwater cleanup levels in four



Sampling Groundwater at Zone 1



consecutive annual monitoring events (2000-2003). These results are encouraging and will likely lead to site closure if the trend continues.

### Zone 5 Restoration Activities

The Zone 5 groundwater area encompasses several individual IRP sites, which are in the early stages of the restoration process. Evaluations are still underway to identify the best cleanup options for contaminants identified at these individual sites.

Bioventing is being used to degrade petroleum hydrocarbon contaminants within Zone 5. In May 2004, this system was overhauled by adding new bioventing wells to increase airflow over the site and promote contaminant degradation and removal.

A Proposed Plan, presenting remedial recommendations for eight sites within Zone 5, was distributed for public review on March 27, 2004.

### Rapids Camp Landfill (Zone 6) Monitoring

Following the requirements of the Groundwater Zone 6 ROD (April, 2000), annual monitoring is being conducted at the Rapids Camp Landfill. Landfill No. 3

(LF003) is within the former Zone 6 groundwater area, which has been administratively closed in the IRP process.

There were no contaminants identified at the Rapids Camp Landfill during the 2003 monitoring event. A site inspection found the landfill cap to be in good condition and effective. Future recommendations for the landfill include annual groundwater monitoring and regular inspections of the landfill cap.

### Lake Camp (Zone 7) ROD

The draft ROD for Groundwater Zone 7 is currently in the final stages of regulatory review. Remedies recommended for individual Zone 7 sites include:

- Former Vehicle Maintenance Area and Former Generator Pad: Excavate contaminated soil and treat in a biocell. Perform MNA of contaminated groundwater with annual LTM.
- Drum Landfill: Remove exposed drums, install soil cap, and perform MNA for groundwater contaminants with annual LTM.
- Former Lodge, Disposal Pit, and Construction Landfill: Prepare No Further Response Action Planned document and implement institutional controls.
- Remove surface debris throughout the Lake Camp (Zone 7) area.
- Administratively close Groundwater Zone 7.
- Close individual sites within Zone 7 where no action is required.

### BACKGROUND

Historical Aerial photo of King Salmon Airport



Collecting groundwater field measurements.



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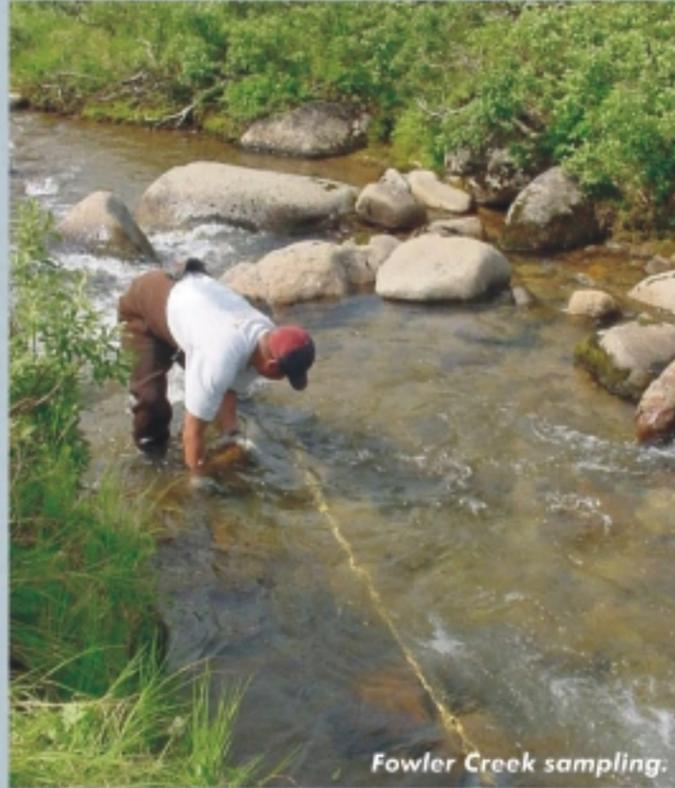


## Unique receptor study conducted at Cape Romanzof Long Range Radar Site

By Keith Barnack  
Remedial Project Manager

Cape Romanzof Long Range Radar Site (LRRS) is the only Air Force installation to conduct a Contamination Migration and Subsistence Receptor Study Project. This study was born out of tribal concern from the local villages (Hooper Bay, Scammon Bay, Paimiut, and Chevak) about the safety of their subsistence food around Cape Romanzof.

This project's uniqueness is that it was contracted through Indian Health Services to the Yukon Kuskokwim Health Corporation (YKHC) to give control to the tribes. They identified and collected marine and land fauna and flora species for analyses. Tribal members from each village received the appropriate training on collection, preservation, and shipping protocols to properly accomplish the work. Details were ironed out in 2002 and sampling started in June 2003 and ended in September 2004. A draft and final report is due in 2005. This project has brought the Air Force and the villages to a much better understanding of Cape Romanzof impact to the local area. Tentative results are encouraging and indicate subsistence food sources are safe.



Fowler Creek sampling.



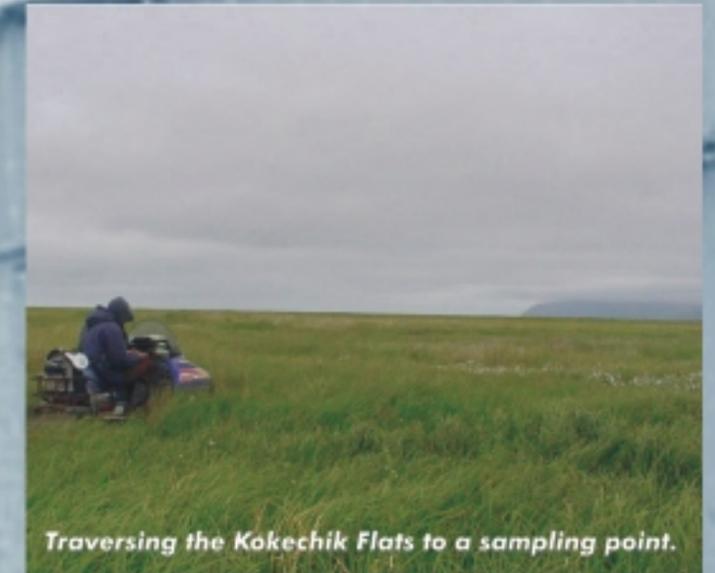
Winter view of upper tram terminal (SS16) from lower camp.



Monitoring well installation at ST09 with Kokechik Bay in the background.

Other on going work this summer included continued monitored natural attenuation (MNA) of SS13 and SS15, former fuel spill areas. Remedial investigation and feasibility study (RI/FS) of ST09, former truck fueling station near the beach; DP011, debris scattered on the backside of Trowak Mountain; and SS14, former drum storage area near the beach. Extended PCB sampling west of LF03, closed landfill, was accomplished to better define the contaminated area before clean up. Proposed plans (PPs) and record of decisions (RODs) will be developed for these sites prior to clean up activities.

Future work is being budgeted for a RI/FS and ROD at SS16 and SS17, upper and lower tram terminal areas for PCB and fuel contamination; and SS10, weather building pad area



Traversing the Kokechik Flats to a sampling point.



## GALENA AIR FORCE STATION TECHNICAL PROJECT TEAM MAKING STRIDES

The Galena Air Force Station (AFS), an Air Force Forward Operating Base, has complex contamination issues and many voices are being heard in the cleanup process. The U.S. Air Force (USAF) is the responsible party for cleaning up the contamination. The Alaska Department of Environmental Conservation (ADEC) is responsible for overseeing the cleanup to ensure it meets the State of Alaska standards for protecting human health and the environment. The Louden Tribal Council and the City of Galena are responsible for tribal members and residents of Galena, protecting their well-being and quality of life. Together these agencies form a powerful team to address the difficult environmental problems at the Galena AFS.

### The Technical Project Team Approach

The U.S. Environmental Protection Agency (EPA), ADEC, USAF, Louden Tribal Council, and City of Galena have agreed not to list the Galena AFS on the National Priorities List (NPL) in lieu increased ADEC oversight and reallocation of USAF resources to Galena. In lieu of the NPL listing or an EPA-ADEC deferral agreement, ADEC recommended development of a facilitated Technical Project Team that includes the Louden Tribal Council, City of Galena, ADEC, Galena Schools, and USAF. This team is responsible for understanding, evaluating, and recommending actions consistent with state and federal regulations at the contaminated sites within the Galena AFS. The project team is facilitated by a neutral entity to ensure meaningful participation in the cleanup process by each group, and to develop trust among the participants. The facilitator helps cultivate an atmosphere where all sides are listened to with respect, and all sides have an equal opportunity to voice concerns.

The Technical Project Team facilitator initially met with each group individually to understand their concerns, questions, and goals for the cleanup process. The facilitator schedules and leads regular team meetings, asks team members for feedback on the meetings, and prepares a summary document for each meeting. The facilitator also helps build knowledge and skills within the local government agencies needed to fully understand the details of the process.

According to participants there are many advantages to the Technical Project Team:

- A neutral facilitator ensures that no one group is in control of the meetings. All participants are on equal footing in an atmosphere where each individual has a voice, and questions, comments, and recommendations are considered with respect.
- Momentum is not lost in legal negotiations that would be necessary if the Galena AFS was listed on the NPL.

- A facilitated technical project team brings up all points of view, and makes sure issues are addressed.
- The facilitator assists the team in determining what aspects of projects are important for team evaluation so that resources are focused on critical project tasks.
- A good project team identifies where information or technical gaps are in the team and then requests the resources needed to answer the questions.

The Technical Project Team is well coordinated and has more flexibility and quicker response times since it is not bound by the restrictions of an NPL agreement.

### Technical Project Team Significant Results

Since the TPT formed there have been several significant accomplishments:

- Acceptance of the former Galena Comprehensive Environmental Management Plan. Had the Air Force been required to conduct the sampling again it would have cost approximately \$5 million.
- Closure of six Installation Restoration Program sites.
- Review and input into the Galena Remedial Investigation/Feasibility Study for 2003/04/05. Assisted in the updating of the Human Health Risk Assessment and Ecological Sampling (subsistence).

**BACKGROUND-**  
Historical photo of an airman striding towards his aircraft at Galena Air Force Station.



## LOUDEN TRIBAL COUNCIL, AIR FORCE RENEW MEMORANDUM OF AGREEMENT

The 11<sup>th</sup> Air Force and the Louden Tribal Council of Galena renewed an historic Memorandum of Understanding (MOU) August 30, 2004, formalizing the government-to-government working relationship between the Air Force and the Louden Tribe. The agreement, originally signed in 1999, was rewritten. The updated MOU signifies an affirmation of the commitment between the two parties to work together.

Participating in the signing ceremony were Peter Captain, Louden Tribe First Chief; Lt. Gen. Carrol Chandler, Commander of 11<sup>th</sup> Air Force; and Colonel Steven Armstrong, Commander of the 611<sup>th</sup> Air Support Group (ASG).

The intent of the MOU is to foster open communication, with an emphasis placed on timely notification of proposed Air Force activities or projects that may affect tribal resources, tribal rights or Indian lands. The working relationship is captured in the Tribe's operating principle "We work together, we help each other."

Since the signing of the original MOU in 1999, the Air Force and the Louden Tribe have met quarterly in formal government-to-government meetings. By working closely with the Air Force, the Louden Tribe played an integral role in the formation of a Technical Project Team, which continues to address technical aspects of environmental cleanup at Galena. The Louden Tribe has also worked closely with the Air Force to promote local hires.

The 611<sup>th</sup> ASG and the Louden Tribe are currently working together under a Cooperative Agreement funded by the Department of Defense to build tribal capacity to further the role of the Tribe as a technical partner in the environmental cleanup activities at Galena. This partnership promotes a better understanding by the Air Force of the culture and values of the Koyukon Athabascans in Galena.

The MOU has proved extremely beneficial in maintaining a focus on the commitment to work together.

## FORT YUKON 2004 BIOVENTING SYSTEM INSTALLATION

The 611<sup>th</sup> Civil Engineer Squadron Environmental Restoration Section installed a bioventing system in 2000 to address diesel fuel contamination in the soil at the former location of a power plant at the Fort Yukon Long Range Radar Site. Glenn Hayes (right), 611<sup>th</sup> Civil Engineer Squadron, performs balance checks inside a structure housing part of the system, and (L to R) Joe Millhouse of the 611 CES, and Dr. Ross Miller and Doug Downey of Parsons Infrastructure and Technology Group, Inc., conduct field performance evaluations of the system.





## PARTICIPANTS FIND 2004 ALASKA STATEWIDE RESTORATION ADVISORY BOARD (RAB) WORKSHOP INTERESTING, CHALLENGING

The 611<sup>th</sup> Civil Engineer Squadron (CES) and the Air Force Center for Environmental Excellence Western Regional Environmental Office sponsored the fourth annual Statewide Restoration Advisory Board (RAB) Community Co-Chair Workshop at the Egan Center in Anchorage, February 12, 2004.

Attending the workshop were RAB community co-chairs, military co-chairs, RAB members, and tribal, state, federal, and military representatives. The objectives of the workshop were to enhance communication between the community and military co-chairs, and to provide an educational forum for the co-chairs.

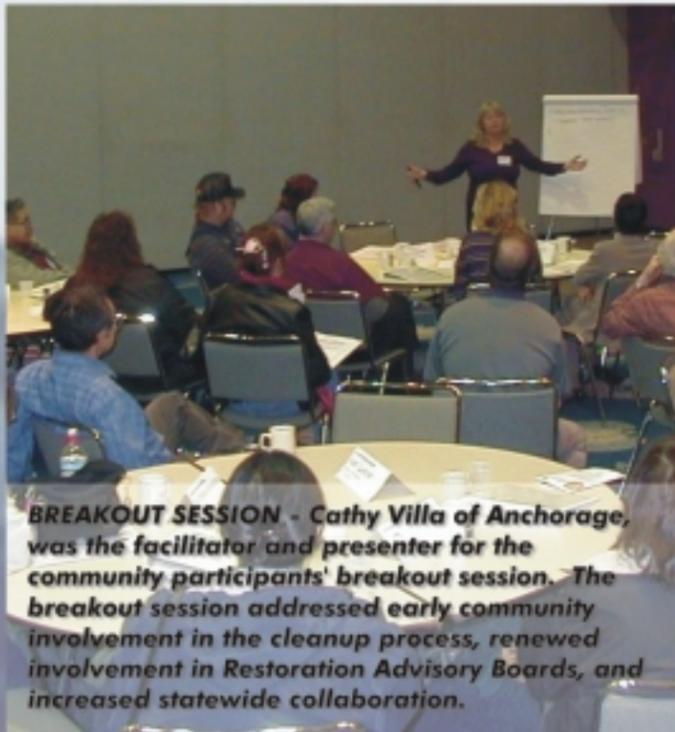
Four educational breakout sessions were presented during the workshop: "CERCLA 101" How the Installation Restoration Program process works, and Roles and Responsibilities for Co-chairs; Facilitation Training for Co-chairs; Draft Proposed RAB Rule, and How to get the most out of Technical Assistance for Public Participation Grants; and Epidemiology/Cleanup Standards - A Technical Discussion.

Breakout sessions consisted of discussions among three groups of workshop participants: community, federal, and state participants. In previous statewide RAB workshops community members requested the chance to discuss issues and information among themselves. The goal of the breakout sessions was to provide this experience for all RAB workshop participants in a facilitated environment to foster positive thinking.

The groups met separately and discussed ideas on what has worked well in their RAB. Facilitators encouraged participants to focus specifically on communication and understanding between a RAB and the federal and state project staff. All three groups then reconvened to share their issues and findings for open discussion. Some of the topics discussed included setting agendas for RAB meetings; assessing the community voice in regards to site cleanup prioritization and processes; communicating with respect among different cultures; presenting documents in "layman's terms" to help community review; and improving access to documents for review.

In the Community Participants breakout session the group identified three things they would like to have implemented:

- Community members would like to receive and provide input on sites more often, and earlier in the cleanup process.
- Community members would like increased input on agenda setting, increased community co-chair participation, and a two-day RAB workshop.



**BREAKOUT SESSION** - Cathy Villa of Anchorage, Alaska, was the facilitator and presenter for the community participants' breakout session. The breakout session addressed early community involvement in the cleanup process, renewed involvement in Restoration Advisory Boards, and increased statewide collaboration.

- Community members would like to see increased statewide collaboration, and the creation of workshops and a website for more feedback opportunities.

In the State Participants breakout session the group focused primarily on:

- Aspects of RAB meetings that they found successful.
- Areas of improvement.
- Communication.
- Trust building.

In the Federal Participants breakout session the group discussed:

- Perspectives on what works in a RAB.
- Areas of improvement for the federal government.
- General areas of improvement included clarification of the DoD RAB policy.
- Another area of improvement included a shift in the "Us" versus "Them" mentality, which can be accomplished through increased community involvement, increased ADEC involvement, and increased publicity.
- Resources such as websites, pre-agenda setting conference calls, and meeting minutes were also recommended.



Finally, several participants echoed the need to have more community involvement throughout the life of the RAB, and also during the planning process for the workshop, particularly the need for a two-day workshop.

In closing the workshop several participants acknowledged the hard work that the Air Force had put forth in organizing the 2004 workshop, and the dedication of all participants, particularly the community members, many of whom traveled great distances and volunteered their time.

"The bottom line of this workshop is the community, the health, and the environment, and this meeting serves as a great mechanism," said Ms. Janice Larkin, Office of the Under Secretary of Defense (Environment, Safety, and Occupational Health).



**STATEWIDE RAB WORKSHOP** - Scott Hansen, Chief of the 611<sup>th</sup> Civil Engineer Squadron Environmental Restoration Section, opened the Statewide RAB Workshop and made welcoming remarks. Seated at the head table are the keynote speakers for the event.

**BACKGROUND-** Historical photo of an airman monitoring a radar station.

### What is a Restoration Advisory Board (RAB)?

A RAB brings together people who reflect the diverse interests of the local community, enabling the early and continued flow of information between the community, DoD, and environmental oversight agencies. The DoD created RABs to ensure that all stakeholders have a voice and can actively participate in the review of documents. RAB community members provide advice as individuals to the decision-makers on restoration issues. It is a forum to be used for the expression and careful consideration of diverse points of view. The RAB complements other community involvement efforts, but does not replace them. The Air Force will continue to be responsible for fulfilling all public involvement requirements.

### Who is on a RAB?

A RAB is composed of community members, and representatives from the Air Force Installation and Federal, State and local governments.

RAB members should represent the diverse interests within the community, including both supporters and critics to generate broad input from all interested parties.

A RAB may contain up to 20 members in order to reflect community diversity, yet still remain workable.

A RAB is co-chaired by both a military representative and a community representative.

### How does a RAB work?

A RAB serves as a forum for discussion and exchange of information between the community, the Air Force, and Federal, State and local agencies regarding the cleanup program at an Air Force installation.

A RAB provides an opportunity for stakeholders to review the restoration cleanup progress, provide input, and participate in dialogue with decision-makers.

A RAB complements - but does not replace - other community involvement initiatives.

The RAB provides advice to the Air Force and to environmental oversight agencies on the cleanup program. Specific responsibilities include: addressing issues such as cleanup goals; reviewing plans and documents; identifying proposed requirements and priorities; conducting regular meetings. RAB meetings are always open to the public.



## DOD PLANS 2005 STATEWIDE RAB WORKSHOP

The Department of Defense (DoD) will again host a restoration advisory board (RAB) co-chair training workshop during the 2005 Alaska Forum for the Environment (AFE). The workshop will be an all-day event, held on February 10, 2005. The event will take place at the Egan Center, in Anchorage. The Navy will be the facilitator for the 2005 event.

The training workshop will be structured differently than previous RAB roundtables. Based on 2004 event comments, and comments received during recent telephone conversations with RAB co-chairs throughout Alaska, the 2005 event will involve more direct participation of community members and will be training oriented.

Three community members, associated with three different RABs in Alaska, have volunteered to lead three different educational tracks. The track leaders are:

Arlene Thomas - Barrow and Anchorage Communities  
Raymond Neakok - Nuiqsut RAB  
Richard Sherman - King Salmon RAB

The workshop day will include focused training in three specific areas or "tracks." The tracks were selected based on comments received from RAB co-chairs during the aforementioned telephone conversations. The three topics most often mentioned were:

- Protecting Subsistence Food Sources;
- Providing Safe Drinking Water;
- Understanding Environmental Law and Policy.

During the course of the day, each track will move separately in three sessions (introductory, intermediate and advanced). Within each of these three levels of training, Alaska site-specific case studies will be presented. The community members that have volunteered to serve as track leaders will design their individual track in the manner that they feel will best meet the needs of the attending RAB co-chairs. The community members will facilitate (or lead) each track throughout the day, and the design of the individual track should provide an interactive forum to exchange information.

RAB members involved in their respective RABs longer will be encouraged to share their knowledge with newer RAB members, as well as broaden their environmental base during the more advanced sessions. The Navy anticipates this workshop format will address the desire for training and enable RAB co-chairs to bring this information back to their communities for more discussion.

## ENVIRONMENTAL FLIGHT WINS INSTALLATION EXCELLENCE AWARD

The 611<sup>th</sup> Civil Engineer Squadron (CES) Environmental Flight has won the 2004 Commander-in-Chief's Installation Excellence Award Special Recognition Category.

The Commander-in-Chief's annual award for installation excellence is a presidential-level award. The special recognition award program recognizes units, teams, projects, and individuals demonstrating exemplary achievement in the spirit of installation excellence.

A component of the Environmental Flight that contributed heavily to the 611<sup>th</sup> CES' selection for the Commander-in-Chief's award was the Environmental Restoration Section.

The Environmental Restoration Section is solely responsible for executing the largest environmental cleanup program in Pacific Air Forces. The section

manages cleanup of 458 contaminated sites at 40 facilities located throughout Alaska. During fiscal years 2003 and 2004, the Environmental Restoration Section directed more than \$43 million in environmental cleanup.

The Environmental Restoration Section is lead by Scott Hansen, program manager; Steve Mattson, deputy program manager; project managers Scott Tarbox, Stan Slagle, Dave Hertzog, Dave Longtin, Keith Barnack, Todd Fickel and Larry Underbakke; community relations coordinators Roger Lucio and Steve Wilhelmi; tribal liaison Sandra Borbridge; Ron Terry, program analyst; and office automation assistant, Wendy Dickemore.



## KAKTOVIK CLEAN GREEN ALASKA



**ENVIRONMENTAL MESSAGE** Roger Lucio, 611<sup>th</sup> Civil Engineer Squadron Environmental Restoration community relations, presented a "Clean Green Alaska" environmental awareness class to students at Kaktovik. The "Clean Green Alaska" environmental awareness presentation continues to be highly popular in rural communities. To date more than 920 students have received the environmental education.



## ENVIRONMENTAL RESTORATION TO LAUNCH MILITARY MUNITIONS RESPONSE PROGRAM (MMRP)

By Roger A. Lucio

Although most of Alaska's remote installations are unaffected, the 611<sup>th</sup> Civil Engineer Squadron at Elmendorf Air Force Base is leaving no stone unturned to make sure the public is informed about the Military Munitions Response Program (MMRP). The effort is also aimed at insuring safety. The program was established by the Department of Defense to address unexploded, discarded munitions, and chemical constituents of munitions that were used or released in support of military activities. The installations targeted under the MMRP include, Campion Air Force Station, Fort Yukon Long Range Radar Site, Eareckson Air Station, King Salmon Airport, Galena Airport and Kotzebue Long Range Radar Site.

The MMRP is administered by the Department of Defense under the Defense Environmental Restoration Program (DERP). The first steps taken include conducting Preliminary Assessments and then performing Site Investigations (SI) at the sites in question.

A Preliminary Assessment or PA is a limited investigation that uses existing information to recognize the actual existence of the site in question. The PA determines whether a hazard is present, identifies potential receptors and determines whether further action is necessary.

There are three primary steps in conducting a PA; physical inspection of the site, records search and review, and public interviews. The physical inspection of the site involves a visual inspection to identify evidence of any releases. Evidence may include but is not limited to: stained soils, distressed vegetation, discolored bodies of water, disturbed earth, visible munitions constituents or unexploded ordnance. The physical inspection also involves, identifying potential receptors such as drinking water wells, surface water bodies and environmentally sensitive areas that may impact either human health or the environment.

The PA also involves conducting a records search which includes detailed research, reviewing records from a variety of sources including installation records, range operation records, real estate records, aerial photographs, planning

records, civil engineer records and previous studies.

One of the most important components of the PA is the public interviewing process. Interviews are conducted with community members and former installation personnel familiar with the site. The interviews can help identify history of land use and ownership, undocumented unexploded ordnance or munitions disposal sites, regulatory actions including inspections, violations, and removals, as well as providing information on potential site records that may be overlooked.

A Site Inspection or SI provides the first opportunity to generate detailed site characterization data by collecting and analyzing samples. The Site Inspection consists of a visual inspection of the site, geophysical screening of areas to be sampled, and sample collection and analysis.

The objectives of the SI include: addressing state and federal data requirements not met by the preliminary assessment, conducting limited geophysical screening at the potential impact areas, conducting focused field sampling and laboratory analysis to support the development of a conceptual site model, providing the data necessary to complete the relative risk module of the prioritization protocol, and maintaining and enhancing stakeholder involvement and determining the next appropriate action.



As part of the Defense Appropriation Act, Congress directed the Department of Defense to develop an inventory of defense sites that are known or suspected to contain unexploded ordnance and discarded munitions.

For additional information on the MMRP and affected sites being addressed by the 611th CES please contact the Environmental Restoration Section's Community Relations office toll free at 1-800-222-4137 or commercial line at (907) 552-4506. The office can also be reached via fax at (907) 552-5311, or email at [roger.lucio@elmendorf.af.mil](mailto:roger.lucio@elmendorf.af.mil)

**BACKGROUND**  
Historical photo of bomb dump in the Aleutians.



## AIR FORCE CLEANUP PROJECT MOVING AHEAD AT NIKOLSKI

A Feasibility Study was completed in 2003 to evaluate different alternatives that could be used to cleanup contamination. A Baseline Human Health and Ecological Risk Assessment Report was completed in 2004 to predict the risk to humans and animals based upon specific uses of land at four sites (OT001, SS003, SS004, and WP007).

### Landfill 1 (LF001)

This landfill is regulated under State solid waste regulation in accordance with an active landfill permit. There was some fuel contamination in one soil sample obtained from LF001. No contamination is expected to spread from the landfill. All future action at this site will be performed under State of Alaska solid waste regulations.

### Former Composite Building (OT001)

Soil samples obtained from OT001 contained chemicals found in fuel. This site was addressed in the risk assessment, considering the current land use. The residential land use scenario was not evaluated because it is unlikely that families with children would ever live at this site. No further cleanup action is recommended based upon current land use.

### Former Dam and Pumphouse (AOC01)

Only one sample of soil contained lead slightly above the cleanup level. This is not representative of an extensive amount of contamination. No action will be proposed to address this site.

### Former Water Supply House (SS002)

No chemicals were found in soil above cleanup levels. Therefore, no further action will be proposed.

### Petroleum, Oil, & Lubricant (POL) Pipeline (SS003)

Fuel was found in soil in two areas along the pipeline. This site was addressed in the risk assessment, considering the current land use. The residential land use scenario was not evaluated because it is unlikely that families with children would ever live at this site. No action will be proposed to address this site.

### POL Storage Area (SS004)

Fuel was found in soil and groundwater at this site. The risk assessment addressed this site. Only the residential land use scenario was evaluated because this incorporates the most protective assumptions. A study will be conducted to evaluate the alternatives to address contamination at this site.



### Runway Lighting Vault (SS005)

No contamination was found above cleanup levels in the soil or the concrete in this building and around the underground fuel storage tank nearby. No action will be proposed under Federal and State pollution regulations. The tank will likely be closed in accordance with underground storage tank regulations.

### Former Drum Storage Area (SS006)

Fuel and solvent was found above cleanup levels in the soil at SS006. No chemicals were found to exceed cleanup levels in groundwater. It is likely that the USAF will propose excavation and treatment of soil contaminated by USAF activities.

### Construction Camp Septic Tank (AOC07)

Solvent was detected in a surface water seep down the hill from the tank. No contamination was detected above cleanup levels in the portion of the seeps closest to the lake, in the soil, in the lake, or in the sediment. The USAF expects to close the tank in accordance with regulation applicable to septic tanks. Long-term monitoring will likely be proposed to address the seep.

### POL Outfall (WP007)

Fuel and PCBs were detected in soil above cleanup levels. The risk assessment concluded that no action is recommended based upon current land use.

### Composite Building Septic Tank and Outfall (AOC08)

No contamination was detected in soil near the tank. No contamination was detected above cleanup levels in a soil sample from the base of the cliff below the discharge line (outfall). The USAF expects to close the tank in accordance with regulation applicable to septic tanks. No action will be proposed to address soil.

### Two 20,000-gallon Underground Storage Tanks (AOC09)

Because AOC09 is located in site OT001, chemicals in soil will be addressed as part of OT001. The tanks will likely be closed in accordance with underground storage tank regulations.

### Former Transformer Building and White Alice Communication System Site (OT010)

Soil samples contained polychlorinated biphenyls (PCBs) above the cleanup level for unrestricted land use. The USAF expects to propose excavation and off-site disposal of contaminated soil.

### What is next?

Prior to selecting the action to address each site, the USAF will produce a Proposed Plan and make it available for review and comment. The Proposed Plan will summarize environmental conditions at each site. It will discuss alternatives that were evaluated to address each site and will present the preferred alternative. After the public comment period, the USAF will consider public comments and select the alternative for each site. The remedy for each site will be documented in a decision document that will be signed by the USAF and the State of Alaska. The cleanup is currently scheduled to be funded in federal fiscal year 2007.

If you have questions, contact the Project Manager, Scott Tarbox, by calling (800) 222-4137 or (907) 552-7303.



## Installation Restoration Program (IRP)

Alaska has played a strategic role in national defense for over 130 years. A strong military presence was established during World War II, with substantial military resources maintained throughout the Korean War, the War in Vietnam, and the Cold War. Since then, activities at many installations have been reduced or eliminated. To address conditions created by past military events and practices, the U.S. Department of Defense (DoD) created the Installation Restoration Program or "IRP".

### OVERVIEW:

With growing awareness of the long-term effects of hazardous materials on the environment the DoD developed the IRP in the 1980s to address conditions at military installations around the country. The IRP includes identification, evaluation, and remediation of former disposal and spill sites at DoD facilities. Most IRP activities are conducted according to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as the Superfund Act.

The Air Force IRP policy is to "remediate all sites that pose a threat to human health, safety, and the environment, regardless of whether they are included on the [Superfund] National Priorities List (NPL)". The objectives addressing this policy include:

- Identifying sites and Areas of Concern
- Investigating threats
- Cleaning up sites
- Closing out IRP sites

To achieve the IRP objectives, the Air Force evaluates remedial response alternatives based on the following nine criteria:

1. **Protection of human health and the environment:**  
How well does the cleanup alternative protect human health and the environment through elimination, reduction, or control of contaminated areas?
2. **Compliance with applicable or relevant and appropriate requirements (ARARs):**  
Does the alternative meet cleanup standards and comply with applicable government laws and regulations?
3. **Reduction of toxicity, mobility, or volume:**  
Does the alternative effectively treat the contamination to significantly reduce the toxicity, mobility, and volume of the hazardous substances?
4. **Short-term effectiveness:**  
Does the alternative mitigate potential adverse effects to either human health or the environment during construction or implementation?
5. **Long-term effectiveness and permanence:**  
How well does the alternative protect human health and the environment after cleanup, and are there any risks remaining at the site?
6. **State acceptance:**  
Is the alternative acceptable to associated state agencies?
7. **Community acceptance:**  
Is the alternative acceptable to community members?
8. **Implementability:**  
Is the alternative both technically and administratively feasible?
9. **Cost:**  
What are the capital and operating and maintenance costs of the alternative?

The ultimate goals of the Air Force are completing site cleanup and site closeout.



## STAGES IN THE IRP PROCESS

A standard, staged process is applied at all IRP sites, as depicted below.

### 1. Preliminary Assessment/ Site Inspection (PA/SI):

Conducting a record search, interviews, and site visits; and collecting samples to confirm the presence or absence of contamination.

### 2. Scoping Planning:

Scoping work for remedial investigation, cost estimating, and writing work plans.

### 3. Remedial Investigation/ Feasibility Study (RI/FS):

Performing sampling, analysis, and risk assessment activities; and developing cleanup alternatives and remedial action(s).

### 4. Proposed Plan:

Discussing remedial actions, and recommending remedial action.

The RI/FS and Proposed Plan are made publicly available, with a minimum 30-day public comment period followed by a Public Meeting.

### 5. Decision Document

Presenting responses to public comments on Proposed Plan, and describing remedial action selected.

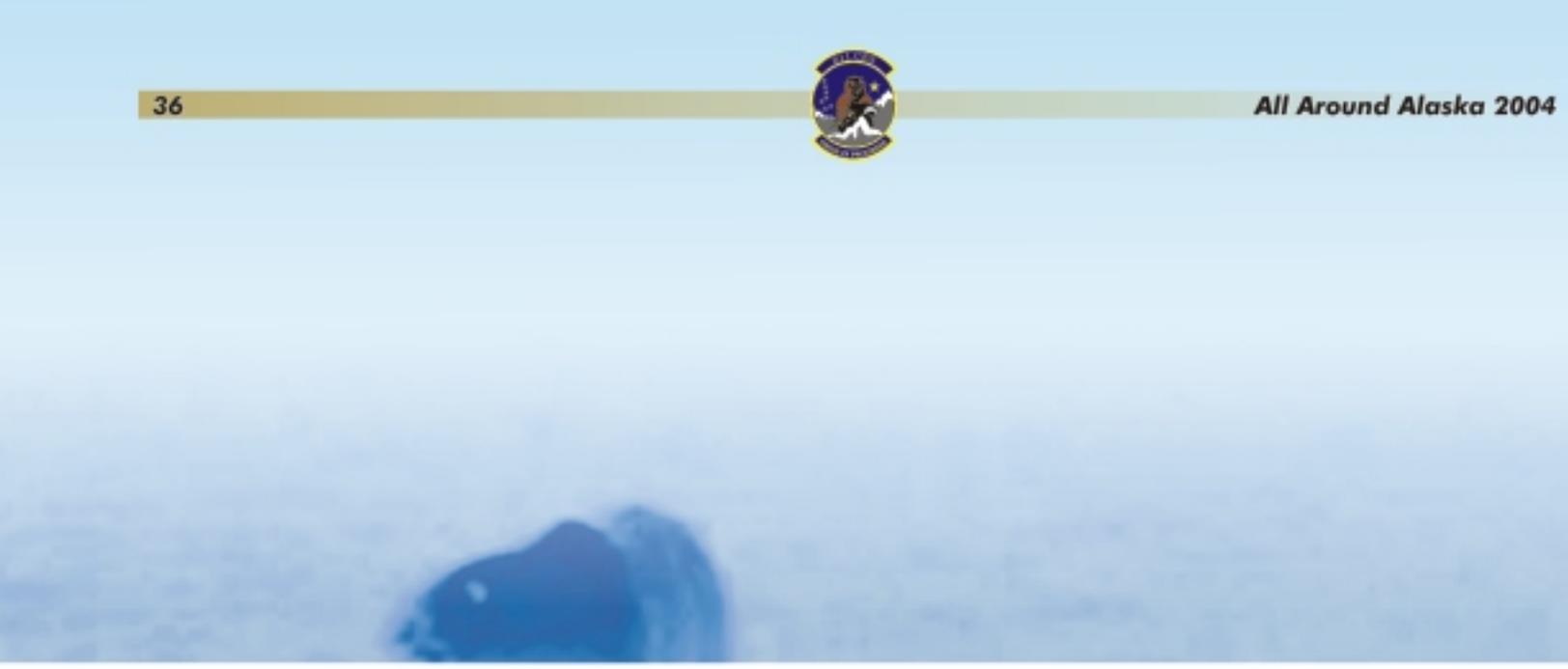
### 6. Remedial Design/ Remedial Action:

Developing remedial engineering specifications, and implementing construction of cleanup solution(s).

### 7. Post Remediation Controls:

Monitoring cleanup operations, and measuring effectiveness of cleanup solution(s) over time.

Ongoing community relations include Community Relations Plan and updates, Restoration Advisory Board (RAB) meetings, workshops, training, fact sheets, public notices, reports, and presentations, with an information repository for all materials.



*BEARING INTEREST --- Air Force remedial project managers with the 611<sup>th</sup> Civil Engineer Squadron work with a variety of stakeholders who are interested in the environmental cleanup of military sites near their communities. Even the polar bears at Kaktovik have an interest in the Air Force cleanup of the nearby Barter Island Long Range Radar Site.*



**The ALL AROUND ALASKA newsletter is published annually by the 611<sup>th</sup> Civil Engineer Squadron Environmental Restoration Section at Elmendorf Air Force Base. ALL AROUND ALASKA is written and designed to inform the public about the Air Force's environmental cleanup statewide. Questions or comments concerning ALL AROUND ALASKA should be directed to the Community Relations Office at 1-800-222-4137. Written comments should be mailed to: 611 CES/CEVR, 10471 20<sup>th</sup> St., Suite 302, Elmendorf AFB, AK 99506-2200. Email: [steven.wilhelmi@elmendorf.af.mil](mailto:steven.wilhelmi@elmendorf.af.mil)**

