US Army Corps
of Engineers
Alaska District

Trip Report

Northeast Cape
Formerly Used Defense Site (FUDS) (F10AK0969)
Gambell FUDS (F10AK0696)

St. Lawrence Island, Alaska

December 12-14, 2011

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Trip Report
St. Lawrence Island, Alaska

1. General

On 12 December 2011, Colonel Reinhard Koenig, Carey Cossaboom, Lisa Geist, Ken Andraschko, and Amanda Shearer of the Alaska District (CEPOA), traveled to St. Lawrence Island, AK to participate in two Public Dialogue Meetings to discuss environmental cleanup and health concerns. The team returned to Anchorage late in the evening on 14 December 2011.

2. Purpose

The purpose of the trip was to participate in two Public Dialogue Meetings facilitated by the United States Environmental Protection Agency (US EPA) to discuss environmental health and cleanup concerns of residents on St. Lawrence Island. Attendees included:

- Mr. James Balocki – Headquarters, USACE
- Ms. Georgeie Reynolds – Tribal Liaison, Headquarters USACE
- COL Reinhard Koenig – Commander, Alaska District
- Mr. Kenneth Andraschko – Program Manager, Alaska District FUDS Program
- Mr. Carey Cossaboom – Project Manager, Alaska District
- Ms. Lisa Geist – Technical Lead, Environmental Engineering, Alaska District
- Ms. Amanda Shearer – Tribal Liaison, Alaska District
- Ms. Sylvia Kawabata, US EPA, Region 10
- Mr. Matt Wilkening, US EPA, Remedial Project Manager
- Mr. John Halverson, Program Manager, Alaska Department of Environmental Conservation
- Mr. Curtis Dunkin, Project Manager, ADEC
- Ms. Jennifer Currie, Alaska Department of Law
- Ms. Vi Waghiyi, Alaska Community Action on Toxics (ACAT)
- Ms. Samarys Sequinot-Medina, ACAT
- Mr. Ron Scrudato, Technical Assistance for Public Participation (TAPP) Provider
- Mr. Joe Sarcone, Agency for Toxic Substances and Disease Registry
- Ms. Kristi Parker Celico, Facilitator, Rocky Mountain Collaborative Solutions

3. Previous Activities

In September 2009, a delegation of representatives from the St. Lawrence Island communities of Gambell and Savoonga travelled to Washington, D.C. to meet with various agencies and congressional staff regarding their concerns about the cleanup of former military facilities on St. Lawrence Island. The delegation also formally requested the US EPA review the Corps' cleanup of the Gambell and Northeast Cape FUDS. In response to the concerns expressed by the delegation, the US EPA engaged a facilitator to begin planning a community Dialogue Meeting for September 2011. On 6 January 2011, the US EPA facilitated a large conference call with representatives of multiple agencies and many community members. The proposed purpose of the Dialogue Meeting under consideration was to address broader policy issues which are beyond the scope of the Restoration Advisory Board (RAB); to identify common priorities and concerns; and/or to develop solutions that are responsive to the

diversity of stakeholder concerns. The January 2011 conference call suggested the creation of 5 workgroups to discuss topics, including a small workgroup to plan the logistics for a Dialogue Meeting. Multiple additional conference calls were held since January 2011 to develop the agenda and logistics for the proposed Dialogue Meeting.

4. Field Activities

The USACE team departed Anchorage on Monday, December 12th in the evening on Alaska Airlines, arriving Nome around 9 pm. The USACE team stayed overnight at the Nome Nugget Inn. On Tuesday morning, December 13th, the team departed for Savoonga on ERA Airlines, arriving around 9:30 am. The team proceeded to the Native Village of Savoonga IRA building. Preparations for the Dialogue meeting were underway, as the facilitator, Ms. Kristi Parker Celico had arrived in Savoonga the previous afternoon. Local community members were helping prepare a shared lunch of reindeer stew and fry bread. Invited guests from the various agencies contributed fruit, cookies, and other snacks to share.

Kristi Parker Celico called the meeting to order at 10:30 am. Myron Kingeekuk, Mayor of Savoonga welcomed the gathered agency representatives to the village. Morris Toolie, Sr. opened the meeting with a prayer. Attendees then introduced themselves. A complete list of attendees is attached. Vi Waghiyi from Alaska Community Action on Toxics and a shareholder of the Native Village of Savoonga, also thanked everyone for coming to the meeting. Ms. Waghiyi spoke about Annie Alowa, a former health aide and respected elder who pioneered efforts to bring attention to conducting a thorough cleanup of Northeast Cape. Robert Annogiyuk, Native Village of Savoonga NALEMP Project Manager also spoke about Annie Alowa and showed a recovered board (with her name on it) from Annie's café at the former Northeast Cape village. The NALEMP cleanup crew found the board at the café site while demolishing buildings at the Native Village of Northeast Cape (Fish Camp) last summer. Annie's motto was "let's not point fingers, just get this place cleaned up". We're all working together, and happy to have everyone gathered here today.

Ms. Celico stated the meeting evolved from community representatives traveling to Washington, DC and meeting with senior leaders from US EPA, USACE, Department of Defense, and other Congressional offices. The discussions today should focus on problem solving and how to move forward with the 3 main concerns: human health, environmental health, and environmental justice/fairness.

Sylvia Kawabata, gave US EPA's perspective on the meeting. EPA was asked to review the USACE methods and cleanup actions because the community expressed concerns about long range transport/deposition of contaminants with persistent organic pollutants (POPs). US EPA Headquarters then asked Region 10 to get involved. There has been a lot of hard work and patience from many people who participated in the various conference calls to organize this Dialogue Meeting.

John Halverson, Alaska Department of Environmental Conservation (ADEC), thanked the community for their hospitality and inviting everyone together. ADEC's role is to make sure everyone works together, listens to the concerns, and addresses those concerns. There are a lot of sites across Alaska which ADEC is responsible for cleanup oversight. Although the cleanup efforts at Northeast Cape have been ongoing for many years, we all wish the job could

be done faster. The ADEC's focus is on protective cleanup levels, it is not feasible given the resources available to remove everything to a pristine state.

Colonel Reinhard Koenig, Commander, Alaska District Corps of Engineers, stated it was his privilege to be in Savoonga again, this was his third trip. Col Koenig emphasized that one third of the resources Congress allocated to cleanup all sites in Alaska were dedicated to cleanup at Northeast Cape last year. The equipment/camp facilities were overwintered, allowing for an extended field season next year. Col Koenig congratulated Robert Annogiyuk and the NALEMP crew for a very successful field season.

James Balocki, Headquarters USACE gave an emotional welcome to the attendees, mentioning the recent passing of his mother. Mr. Balocki was honored and pleased to rejoin the community after having spent time in Afghanistan and was pleased to partner with other agencies and groups and acknowledged the community still has matters of concern. Mr. Balocki thanked the community for keeping the nation strong, acknowledged their contribution to national security on behalf of the DOD. Mr. Balocki stressed he would listen, take the communities thoughts back to DC, and it's important for people to know they have a voice.

Carey Cossaboom gave an overview presentation of the project history at Northeast Cape. The facility was built in the 1960s to keep an eye on the Russians and protect the region from attacks during the Cold War. Remedial investigations occurred in multiple phases over 10 years. A Restoration Advisory Board was formed in 2000 to obtain input from the community, and these comments have resulted in additional investigations. Carey stressed that USACE is mandated to clean up the site to safe levels, but we can't restore the area to pre-military conditions. Building demolition activities were completed in 2000, 2001, 2003, and 2005. In 2009, the Site 7 Cargo Beach Road Landfill was properly capped and the entire landfill was dug through to remove drums with liquid contents. The current focus is on excavation and removal of contaminated soils at the Main Operations Complex and White Alice Site. Additional contaminated soils remain at the Main Complex and White Alice Site, along with the contaminated sediments of the Site 28 Drainage Basin. Remediation of contaminated soils began in 2010 and field work will continue during the 2012 summer season.

Robert Annogiyuk gave an overview of the Native American Lands Environmental Mitigation Program (NALEMP) project executed by the Native Village of Savoonga. NVS entered into their first Cooperative Agreement (CA) with the DOD 3 years ago, a second CA was awarded in 2011 for over $600,000. This past summer, Robert supervised a crew of 5 local laborers to demolish 33 structures at the Native Village of Northeast Cape. They created some non-building-debris piles, in hopes that DoD will approve their removal in a subsequent CA. A remedial investigation is anticipated, pending funding/approval of a new CA. The NVS also wants to conduct an Island-wide survey of other cabins constructed with salvaged material from Northeast Cape. The NALEMP crew members included Scott Kingeekuk, Jess Reynolds, Nicholas Toolie, Albert Kulowiyi, and Elmer Rookok. Robert was very proud of his crew. The NVS has submitted a proposal for additional work next year, but there is no NALEMP funding available yet nationwide.

Matt Wilkening, US EPA Remedial Project Manager, gave an overview of his review of the USACE cleanup actions to date. EPA conducted a prior review of USACE efforts in 2002 and found they were consistent with EPA regulations/guidance. In 2009 ACAT sent a letter to EPA requesting further review. EPA began their review in June 2010 and released the draft report

in December 2011. In summary, USACE is generally following EPA guidelines. ADEC is providing active oversight of their work. There are a few small exceptions to following EPA guidance, such as the use of background concentrations of metals in the risk assessment and the lack of an aquatic species in the ecological risk assessment. However, these small deviations do not affect the overall conclusions of the risk assessment or cleanup actions selected. The PCB cleanup level of 1 mg/kg is adequate and within the range of typical EPA cleanup levels. The groundwater at the Main Operations Complex is being remediated by monitored natural attenuation which is an acceptable method commonly used at other EPA sites. Long-term monitoring will be required. EPA recommends developing a more detailed conceptual site model for the groundwater at the Main Complex, determining groundwater flow direction and the rate at which contaminants are degrading over time. EPA recommends considering the addition of an oxidizer to create an oxygen rich environment to enhance the breakdown of diesel in the environment. EPA also reviewed the Site 7 Cargo Beach Road Landfill remedy. Capping is consistent with the approach EPA would have used. EPA recommends continuing long-term monitoring to ensure the cap remains intact. EPA concluded that long term monitoring and 5 year reviews are needed at the Main Operations Complex and Site 7 Landfill. EPA also recommends collecting more data on surface water at the site, and invited the Agency for Toxic Substances and Disease Registry (ATSDR) to review data gathered since 2002 at Northeast Cape.

A community member said that they've had concerns for many years about the site and health of former workers. For example, 3 people working at the site during the winter had to contain a spill at the top of the Radome site. These individuals have all since died of cancer. Every summer, drain oil was used for dust control. This oil was not safe, the roads should be checked for contamination, too. A concern was also raised about dead vegetation observed along the side of the road at the mountain top leading to the Radome site.

Vi Waghiyi stressed that it is very important the community review the EPA's document. Matt Wilkening agreed to accept comments until 31 January 2012.

Jeanette (Muffy) Iya expressed her appreciation for EPA representatives coming to Savoonga. She wished EPA had been involved since the beginning, wondered why Northeast Cape wasn't listed as a Superfund site.

Sylvia Kawabata, US EPA, explained how sites are listed on the National Priorities List. Since the EPA determined the Corps of Engineers is proceeding with cleanup as EPA would expect, adding Northeast Cape to the NPL would not add value to the cleanup process. The Corps is doing the work in accordance with EPA expectations. Listing a site on the NPL requires support of the Governor of Alaska, and usually takes at least 1-2 years.

Muffy Iya asked how many 5 year reviews would be conducted? Matt Wilkening replied until the contamination breaks down and reaches acceptable, safe levels for unrestricted use.

Peggy Akeya stated the Corps should keep cleaning up the Island, because global warming will cause things to shift and reappear. Carey Cossaboom replied that we've given this concern some thought; permafrost thawing might change groundwater flow direction. Dean Kulowiyi stated that naturally produced methane can be released from melting permafrost.

Paul Rookok stated he worked for 3 summers at Northeast Cape and is worried about sampling of resources such as the Suqitughneq (Suqi) River. Paul believes additional fish sampling is necessary of the Dolly Varden, stickleback, because these species are windows to contamination. Carey Cossaboom replied the Corps is committed to conducting another sampling event after the active remediation work is completed upstream. Paul also expressed concern about monitoring the surface water during cleanup activities. John Halverson, ADEC, agreed that monitoring during cleanup to check for down gradient runoff is a good idea.

Perry Pungowiyi asked if the Corps had calculated how long the monitored natural attenuation process will take. Carey Cossaboom replied not yet, we need several years of data first. Ron Scrudato stated it was his opinion that monitored natural attenuation was not likely to succeed with the high concentration of peat at the Main Complex.

Vi Waghiyi stated that many folks have concerns about permafrost and global warming. She requested EPA interview community members as part of the comment/review process, especially elders, people who worked at Northeast Cape during the cleanup, it is important to get the community's perspective as well as from ACAT staff and researchers like Ron Scrudato or Dr. Carpenter. Matt Wilkening responded that he did review some RAB meeting minutes and responsiveness summaries regarding community concerns expressed during the Proposed Plan stage.

Jim Balocki commented that future budgets are in peril, there is a tradeoff, or risk, to continue with cleanup activities versus further study. The DOD is faced with potential 30% budget cuts, which will force more conversation about risks and choices.

Lunch Break 1 pm – 1:30 pm

The community of Savoonga, in collaboration with the invited guests, shared a meal of reindeer stew, fry bread, fruit, and cookies.

Kristi Parker Celico continued the meeting by refocusing the group on what we know and don't know regarding illnesses, contamination sources, health care concerns. Kristi reminded the group that the Army does not have a health care mission.

Vi Waghiyi gave an overview of ACAT's work in collaboration with the native communities of St. Lawrence Island, providing environmental health training in the Norton Sound region, and research work supported by the National Institute of Environmental Health Sciences (NIEHS). Vi emphasized that the local community does have expertise in observing adverse environmental affects, and it's important to eliminate and prevent exposure to contamination.

Vi Waghiyi recalled Annie Alowa as a keen and trained observer about the health of her people. Annie observed higher rates of cancer, miscarriages, and low birth weight babies among people who lived and worked at Northeast Cape. Annie's knowledge and forewarnings as a respected community health aide and elder are important to remember.

ACAT's community-based research at Gambell and Northeast was focused on validating illness from military contamination. Various sampling efforts have been conducted including blood serum sampling, and environmental media sampling (air, groundwater, surface water, edible plants, and sediment cores), traditional food studies, and community health surveys.

Vi presented an overview of disease patterns observed on St. Lawrence Island such as cancers, diabetes, low birth weight babies, premature birth, still births, miscarriages, thyroid and other reproductive health problems. According to their research, levels of PCBs in the blood of St. Lawrence Island Yupik people was 6-9 times higher than the average in lower-48 populations. There is evidence of PCBs accumulating in the Arctic via global transport and the military contamination is also a significant source.

Ron Scrudato has been associated with the RAB for about 10 years as the Technical Assistance for Public Participation (TAPP) advisor. He also collaborates with ACAT on their research grants. Ron presented the results of plant, sediment, and water samples collected in 2002 and 2006. They sampled areas at Northeast Cape, Norton Sound, and areas unoccupied by the military, Collier Lagoon and Atuk volcano. Their focus was PCBs which is mostly due to the threat from global sources, but also HCB, DDE, mirex, and select trace metals (mercury). Cesium-137 dating of the Northeast Cape estuary sediment core was conducted to indicate the depositional history of the sediment (pre-1951 or 1951-1964). He selected the estuary location because all groundwater and surface waters at the site eventually end up here. Higher levels of contaminants in the shallower portions of the sediment core indicate recent deposition. The data clearly demonstrates that the Northeast Cape FUDS contributed PCBs to the local environment, but in the estuary the absolute PCB levels are below ADEC cleanup levels.

ACAT also measured total polycyclic aromatic hydrocarbon (PAH) concentration in the Suqi River Drainage in 2002 via passive samplers (semi-permeable membrane samplers (SPMD)). These devices were left in place for 1 month and then retrieved. The highest concentrations were closed to the Main Operations Complex and represent PAH compounds dissolved in water column. Ron presented a summary of the range of sediment core PCB concentrations detected at Northeast Cape (5 – 550 parts per billion), remote St. Lawrence Island locations (less than 5 ppb), and other communities around Norton Sound (less than 15 ppb)[1].

Ron Scrudato presented data from 5 blackfish samples from the Suqi River; concentrations of total PCBs ranged from 7 to 35 ppb. The levels of PCBs detected in SPMDs (2007) from the Suqi River ranged up to 1200 ppb closest to the Main Complex. John Halverson, ADEC, cautioned that a concentration from SPMD samples is hard to derive because the total volume of water flow must be known to calculate a concentration. Organochlorine pesticide detections in the SPMDs were also highest near the Main Complex. Vi Waghiyi commented that in comparison with other studies in Alaska, their research suggests a significant concentration of bioavailable PCBs in the Suqi River, the trend suggests the contamination originates from a military source.

Ron Scrudato showed a comparison of plant sampling data showing washed and unwashed samples. The washed samples had lower concentrations of PCBs, suggesting rinsing removes PCBs attached as dust. Plants from Gambell had lower concentrations compared with those at Northeast Cape. Ron indicated the environments are very different, there is not a lot of fine grained material or organics present at Gambell.

[1] The cleanup level for sediment at Northeast Cape is 700 ppb.

Ron Scrudato summarized his presentation: highest concentrations of PCBs found at Main Drainage of Northeast Cape, PCB concentrations reduced down gradient and over time, aqueous phase PAHs are present in Suqi Drainage, concentration/congener profile in sediment cores indicates a local source of PCBs, not global transport, plant and sediment samples indicate remobilization of contaminants due to remediation. In comparison, Norton Sound area FUDS had less than 15 ppb PCB concentrations in core sediment samples. There was no evidence of mirex, HCB or DDE in sediment, water, or plant samples.

Ron Scrudato stated his main concern was that USACE will go away before things like long-term monitoring are in place, because they can't cleanup to the original state. Ron would like to see more groundwater monitoring, continued fish sampling, and use of SPMDs to ensure contamination is not migrating to the ocean.

Vi Waghiyi continued ACAT's presentation. Vi stated that contaminants become trapped in far-northern latitudes, a virtual hemispheric sink. Northern food webs favor the deposition and retention of persistent, bioaccumulative toxics. These contaminants threaten the health of peoples that reply on traditional diets of fish and marine mammals. Global warming enhances the mobilization and transport of contaminants from local and distant sources, a grasshopper effect. Chemicals in the arctic, such as brominated flame retardents, double every 7 years in arctic species.

Under ACAT's traditional food biomonitoring study, food samples were collected from local hunters on St. Lawrence Island between 2005-2009 including fish, fowl, marine mammals, shellfish, reindeer, meat, blubber, liver, kidney, intestines, and rendered oils. Samples were analyzed for PCBs, mirex, DDE and HCB. Some samples had PCB levels higher than the EPA fish consumption guidelines for cancer risk. Vi noted that the EPA unlimited fish consumption guidelines for PCBs ranged from 1.5 ppb for cancer risk and 5.9 ppb for non-cancer risk. Rendered oil from seal, walrus, and bowhead whale ranged from 202.6 – 451.1 ppb. ACAT was very surprised by the high results found in the bowhead whale.

Vi Waghiyi cited a Mother Earth study of organochlorine pesticide concentrations in mother's milk. Alaskan mothers had the highest concentrations compared with other locations across the globe. Vi stated that data from the Alaska birth defects registry shows that birth defects in Alaska are twice as high as in the United States as a whole. Alaska Native infants have twice the risk of birth defects as white infants born in Alaska. Vi quoted Dr. Bradford Gessner, Material and Child Health Epidemiology unit, "…even independent of differences in cigarette smoking, alcohol consumption, and maternal age, - which is a well-known risk factor for birth defects – Alaska Natives still have an increased risk… that we don't really know how to explain." The recommendations from the State of Alaska, Department of Public Health for women include: avoid contact with known or suspected environmental teratogens. Furthermore, Dr. Jim Berner, pediatrician with the Alaska Native Tribal Health Consortium, who was invited but could not attend today's meeting quotes: "Alaska Native infants have a much higher rate of hospitalization for infection than any other group of US infants." Prenatal exposure to contaminants, which are known to affect the developing immune system, could play a role, and that possibility is now being examined."

Vi Waghiyi stated that studies regarding public health policy, including independent research, help inform cleanup decisions, promote proper diagnoses and treatment of environmental health effects, provide better oversight and hold the military accountable for cleanup. This

influences public health policy to prevent exposures from this and other formerly used defense sites and long-range transport. Vi stated that the Native Village of Savoonga recently submitted a resolution to the Alaska Federation of Natives conference which was passed unanimously in support of national chemical reform and the safer chemicals act.

Vi Waghiyi stated the burden of proof is often put on the community to prove harmful effects from environmental contaminants. ACAT organized a delegation of local youth, leaders, and elders from St. Lawrence Island to visit Washington, DC, and present the results of their research. Vi summarized the actions needed for protection of health and the environment:

- reduce and eliminate sources of on-going exposure from the military sites through protective cleanup;
- remove/remediate contamination sources at Northeast Cape and Gambell;
- install strategically located monitoring wells at Northeast Cape and Gambell to ensure protection of vulnerable water sources and determine whether cleanup efforts are effective;
- ensure adequate funding for NALEMP programs at Northeast Cape and Gambell;
- independent evaluation and site assessment by ATSDR;
- evaluation of Northeast Cape for listing on NPL;
- continue independent community-based environmental health research;
- conduct training for health care professionals to ensure better prevention of exposure, early diagnoses and treatment;
- environmental health tracking to monitor sensitive health outcomes; and
- ensure state/national/international policies that prevent the production and release of chemicals.

Vi Waghiyi concluded with words from Annie Alowa, “We don’t want any of you to fight with each other, but work together to clean it up for our sake”. Vi also acknowledged the role Pam Miller played in keeping this project moving. Vi appreciated the opportunity she’s been given to help her community be involved since they are disproportionally affected by global contamination and military sources. Vi believes they need an extra level of cleanup and remediation, and hopes to bring additional health professionals to the community such as from the Norton Sound Health Corporation.

Joe Sarcone, Agency for Toxic Substances and Disease Registry (ATSDR) gave an overview of his agency’s role. ATSDR was originally invited in 1999 by the Corps and community to look at reindeer on the Island. ATSDR’s report found that levels of contaminants in the reindeer meat were very low and not a concern. Fish from the Suqi River were also evaluated in 1999 as a first glance. They recommended collection of additional data which was collected in 2000. In Joe’s opinion, his agency could do better, should use more appropriate comparison methods and didn’t offer practical advice about eating fish relative to traditional ways. Joe believes a more realistic description of the ways people collect and consume fish should be developed.

Joe stated that ATSDR recently received a petition request from the Native Village of Savoonga to conduct a public health assessment for the Island. Joe acknowledged that a lot more data exists since the last time ATSDR was involved. Joe complimented the Corps of

Engineers for already providing all their Northeast Cape reports – over 18,000 pages of documents, which he sent to his headquarters in Atlanta. Joe also just received another disc from Lisa Geist containing all the Gambell reports produced by USACE. Joe is working with other agencies and groups such as ACAT to gather background and other sampling data. If the petition is accepted, ATSDR will review available data to determine if enough data is available to make a determination whether or not residents are exposed to harmful levels from the FUDS. Joe is pretty confident the request will be approved, a formal response should be sent soon. He will continue to work with the toxicologists in Atlanta and be the local point of contact for community members.

Kristi Parker Celico focused the conversation on what practical advice can be given to the community. Kristi emphasized that Dr. Jim Berner, who was unable to attend, strongly recommends a subsistence diet. Dean Kulowiyi asked who is going to compensate the community and when? Dean expressed frustration that first the subject was Northeast Cape, but now the contamination is from the whole world. Paul Rookuk agreed and wondered if the other agencies worked internationally. Paul expressed concern that coal burning in Russia was depositing mercury on the Island. The Island supports migratory resources, too, but is getting very polluted.

Sylvia Kawabata replied that the US EPA is trying to do its job in terms of regulating these chemicals, but working with other countries is a difficult issue. The United Nations is tackling the problem of global pollutants.

Kristi Parker Celico observed that it doesn't matter where pollution came from if people feel they are getting sick. Kristi recalled that Ron Scrudato pointed out that St. Lawrence Island faces a bigger challenge because of military impacts on top of global impacts. It's very hard to make the connections of cause and effect; what can we do in terms of health care and screening?

Vi Waghiyi responded that St. Lawrence Island is disproportionally affected, the data shows a military effect, and she wants the military to do more cleanup and better site characterization. While a lot of money goes towards mobilization/demobilization, they had to travel all the way to Washington, DC, asking for stricter, residential cleanup standards. They've talked about getting Norton Sound Health Corporation to attend this meeting, but in her opinion they don't have adequate health care resources.

Kristi Parker Celico mentioned that she recently learned the military has health care professionals from the National Guard coming to Savoonga in April 2012 as part of an Army readiness/training event.

Vi Waghiyi stated she is concerned they find out about cancer diagnoses too late. This is a human rights violation. Perhaps the issues on St. Lawrence Island should be addressed at world-wide meetings.

Col Koenig stated the Army readiness program mentioned by Kristi takes medical staff to remote areas for training, in preparation for national contingency missions (natural disasters, etc.). The execution of a study or cancer risk screenings would likely be outside their mission. Jim Balocki agreed the focus would be dental care, primary medical care of illnesses.

Joe Sarcone mentioned that the State of Alaska Department of Health has a Cancer Registry office which he recently worked with. They would need a request from the community to conduct an evaluation of a potential cancer cluster, but it might take 8 months or more for an answer/report.

Muffy Iya expressed frustration that the Norton Sound Health Corporation (NSHC) is not willing to engage the community. Jim Balocki encouraged the community to speak with the board of directors. Sylvia Kawabata cautioned that there is not a good toolkit to quickly or simply diagnose something like cancers. Vi Waghiyi disagreed and said ACAT has established a toolkit for health professionals that was distributed to the communities and NSHC.

Col Koenig encouraged the community to remain engaged in the processes we have ongoing, keep their voices heard, ask the tough questions, show support for the RAB, maintain communications, and understand the various agencies roles and what they bring to the table. Col Koenig encouraged transparency and accountability, and acknowledged resource constraints at the federal level. However, in reality there is a lot more work to do and we will do everything possible to maintain the cleanup efforts.

Jim Balocki suggested the community consider contacting a university or other agency for help with continuing studies and research using grant funding. Mr. Balocki also suggested joining other groups to speak with one voice on the health care justice issue.

Sylvia Kawabata suggested indentifying specific issues with a narrow scope for a pilot project. John Halverson indicated the state of Alaska also has a Health and Social Services department which works together with ATSDR. Jennifer Currie encouraged the community to continue following up frequently on their concerns. Sylvia Kawabata suggested having more in depth conversations or open sessions on particular subjects via teleconference, since travel budgets are restricted for all agencies. Amanda Shearer concurred that a lot of effort was spent planning the logistics for this meeting, which could be redirected towards other things. Vi Waghiyi stressed that it is very important to have face-to-face conversations, misunderstanding can occur over the phone. Lisa Geist stated the Corps is still committed to coming in person for RAB meetings, perhaps we could put time on the agenda for open discussion. Matt Wilkening stated that the EPA is hoping to have another staff person in its Alaska office, so perhaps they could participate in a future meeting in person.

Mitchell Kiyuklook thanked everyone for coming to the Island, and hoped they all enjoyed the reindeer soup. The meeting was adjourned around 5 pm. Ice fog prevented the group from departing Savoonga on Tuesday afternoon, and the regularly scheduled flights were eventually cancelled. The agency representatives remained at the IRA Building and continued discussions about data sharing.

The delegation eventually dispersed to City Hall, the Black Lodge, and the IRA Building for lodging arrangements. The community invited everyone to join them for Native dancing later that evening at the Savoonga Fire Hall.

On Wednesday, December 14th, around 10:30 am, the first group (7 people) departed for Gambell on the regularly scheduled ERA flight shuttle. Special arrangements were made in advance to have 2 inter-village legs. The second group (9 people) departed at 11:30 am, arriving Gambell around noon and proceeded to the Sivuqaq Lodge to store luggage and then

directly to the Q Building for the Dialogue Meeting. Weather this day was very cold, perhaps just above zero, with winds gusting to 20 mph. It was dangerously cold.

The Q Building had limited facilities and no working restroom or running water. The phone line was operational, but no callers utilized the conference line so it was disconnected. The kitchen was full of paper bingo supplies only (no pots/pan/utensils) but did have a working stove/oven. The agency representatives came prepared to provide lunch for the anticipated meeting attendees (~150) and Lisa Geist began cooking the food while the meeting started. Approximately 20 local community members were in attendance, along with the 16 agency/other representatives. Lisa Geist prepared barbecued chicken and pulled pork with rolls, coleslaw, and various types of fruit, cookies, and snacks. The excess food was donated to the Village of Gambell IRA for distribution to local elders.

Kristi Parker Celico opened the meeting with an apology for the late start since the group was stuck in Savoonga the prior evening. Mayor Erika Apatiki welcomed everyone to the community of Gambell. Brief opening comments were given by Sylvia Kawabata, John Halverson, Colonel Reinhard Koenig, and James Balocki.

Carey Cossaboom gave an overview of the Corps cleanup activities in Gambell. The Formerly Used Defense Sites program began investigations in 1994, which continued through 2001. A Feasibility Study and Proposed Plan were completed in 2004. Remedial actions were implemented in 2005 to remove contaminated soil and remaining debris. Additional groundwater sampling at the Gambell water supply area at the base of Sevuokuk Mountain was conducted during 2006. The monitoring wells were decommissioned in 2007. The Gambell FUDS project was approved for closure in 2008.

Community members asked about stained, oily gravel at the playground area near the school. Richard Koozata expressed concern that only concrete debris was removed at this location by NALEMP. Other community members were concerned about the groundwater supply for the Village of Gambell. They wanted additional monitoring of the groundwater drinking water supply area. The community was also concerned about debris under some housing areas.

Carey Cossaboom provided an overview of the NALEMP activities completed in Gambell. Eligible sites were identified in 1999-2001 through a Strategic Project Implementation Plan (SPIP). Removal actions under NALEMP were conducted by Montgomery Watson in 2003. The Native Village of Gambell assumed the managerial leadership for the project in 2004 and oversaw cleanup activities at various sites, consisting primarily of buried debris and incidental contaminated soil removal. The NALEMP work in Gambell is nearing completion, and the Village has proposed demolishing the remaining CAA Housing buildings under an FY2012 Cooperative Agreement, pending approval/funding from DOD.

Matt Wilkening presented the USEPA's review of the Corps cleanup work in Gambell. EPA's primary finding was the Corps' cleanup generally followed EPA guidance while ADEC provided regulatory oversight. The main issues pertain to groundwater, debris left on site, and munitions. Matt Wilkening stated EPA concluded the groundwater investigation was appropriate and the drinking water supply is not at risk from residual contamination at the former radar site on top of Sevuokuk Mountain. Matt also stated the EPA would not address debris unless it represented a hazardous waste, and they would not excavate debris from under structures because that could compromise structural integrity of the building.

Matt Wilkening stated EPA recommended that institutional controls remain in place for possible small arms ammunition (30 caliber rounds) at the beach burial Site 8D. EPA recommended conducting a full sweep of the beach site using an all metal detector such as EM-61. However, EPA does concur that the investigation of Troutman Lake is adequate and it is unlikely munitions are present in the sediments of Troutman Lake.

The group broke for a working lunch around 1 pm. Many local villagers enjoyed the abundance of food and fresh fruit, which they took to share with their kids and families.

Vi Waghiyi and Ron Scrudato presented the results of ACAT's research on St. Lawrence Island and Norton Sound. See previous summary from Savoonga Dialogue meeting. Slides from their presentation are also in the Attachments to this trip report.

Joe Sarcone reported on the status of the recently submitted petition request from Savoonga to have ATSDR conduct a public health assessment or consultation. Joe was optimistic his agency would approve the request and noted that USACE had already provided him with all their previous reports.

Community members stressed they will continue their subsistence/cultural ways of life and will continue to eat traditional foods daily even with the knowledge about contamination levels in various species such as seals, whale, or walrus.

A community member reported having found a larger older munitions round, and was worried children might find more around the area. Ken Andraschko replied the USACE policy is to follow the 3Rs – recognize, retreat, and report. Anyone finding munitions should not move or touch the item, record where they observed it, and report the items to the local village public safety officer or state troopers. Carey Cossaboom stated that in the past, an ordnance disposal squad from Fort Richardson came to Gambell to dispose of the small arms munitions. John Halverson agreed that community members should report any munitions to the local police.

Kristi Parker Celico wrapped up the meeting and offered the opportunity for various agency officials to give closing comments. Kristi again apologized for the condensed meeting time due to the weather delays and flight schedule back to Nome. Paul Apangalook expressed his appreciation for everyone coming to the Island and thanked the group for convening this meeting.

Around 4 pm, ERA Aviation notified the meeting participants that they were landing aircraft in Gambell's adverse weather conditions; the first group departed Gambell, rather hurriedly, for Nome. The second half of the group departed around 4:30 pm. The group reconvened in Nome, checked in at Alaska Airlines, and had a group dinner in Nome before their connecting flight to Anchorage.

The entire group returned to Anchorage by 10:30 pm.

5. Potential Action Items

- Comments due to Matt Wilkening on US EPA's draft Evaluation of USACE Cleanup at FUDS Report by 31 January 2012.
- Consider adding open "health" discussion time during future RAB meetings.
- Submit data or other information to ATSDR for consideration.
- US EPA to consider future conference calls to continue discussions.
- USACE to follow up with Arctic Reservists doing training medical mission in April 2012.
- Joe Sarcone to share contact information with the community regarding making a request of the Alaska Cancer Registry to evaluate concerns.
- Vi Waghiyi to follow up with Norton Sound Health Corporation regarding health concerns.
- USACE to collect downgradient surface water samples in Site 28 Drainage Basin during active cleanup work next field season and include best management practices for runoff management.
- Attendees to share knowledge of grants opportunities or partnerships with Vi Waghiyi.
- USACE should calculate monitored natural attenuation rate for groundwater at the Main Operations Complex, dependent on information available in 2011 Remedial Action Report (not yet completed).
- Ron Scrudato recommended USACE conduct additional fish and water sampling in the Suqi River to ensure contamination is not migrating to the sea.
- US EPA recommendation to continue groundwater monitoring at Main Operations Complex and generate more detailed conceptual site model.
- General concern from the community regarding global warming, melting permafrost, and potential increased exposure to contaminants.
- Sample along side of trail to the former radar facility on top of mountain at Northeast Cape where vegetation doesn't grow.

6. Attachments

A Trip Photos
B Savoonga Dialogue Meeting Agenda
C Gambell Dialogue Meeting Agenda
D USACE Northeast Cape presentation slides
E USEPA Northeast Cape presentation slides
F USACE Gambell presentation slides
G USEPA Gambell presentation slides
H ACAT presentation slides
I Travel checklist

Attachment A

Trip Photos

Photo 1
Colonel Reinhard Koenig addressing participants at the Savoonga Dialogue meeting. Joe Sarcone, ATSDR (left), and Matt Wilkening, EPA, Sylvia Kawabata, EPA, and John Halverson, ADEC (right).

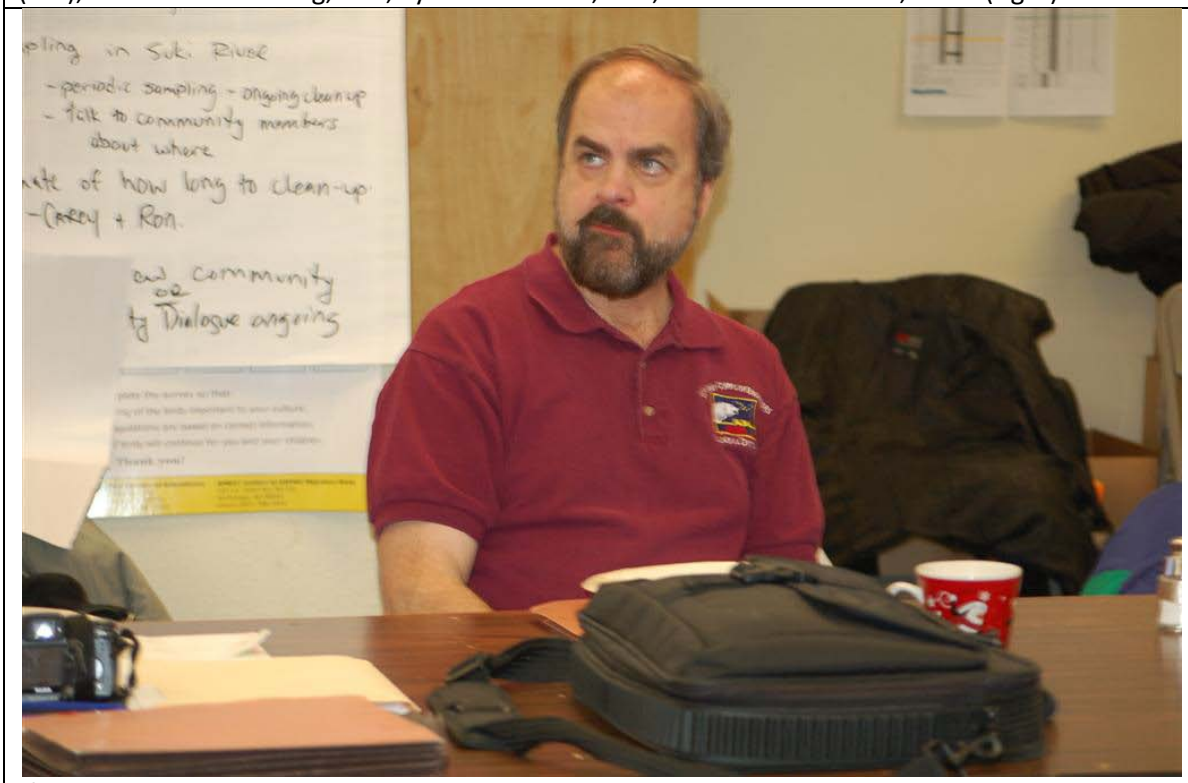


Photo 2
Carey Cossaboom, USACE project manager.

Photo 3
James Balocki, USACE addressing the community in Savoonga.

Photo 4
James Balocki, USACE addressing the community in Savoonga.

Photo 5
Robert Annogiyuk, Native Village of Savoonga NALEMP project manager, holding a board salvaged from the Native Village of Northeast Cape showing the words "Annie Alowa Northeast Cape Nome".

Photo 6
Robert Annogiyuk, Native Village of Savoonga NALEMP project manager.

Photo 7
Community members in Savoonga attending the Dialogue meeting.

Photo 8
Carey Cossaboom, Kristi Parker Celico, James Balocki, Ron Scrudato at the Savoonga Dialogue meeting.


Photo 9
Matt Wilkening (left photo), USEPA and Sylvia Kawabata (right photo), US EPA, addressing the Savoonga Dialogue meeting.

Photo 10
Matt Wilkening, USEPA.

Photo 11
Savoonga community member.

Photo 12
Kristi Parker Celico, facilitator.

Photo 13 and Photo 14
(left) Col Reinhard Koenig at the Savoonga Dialogue meeting. (right) Savoonga community member.

Photo 15
Kristi Parker Celico, facilitator.

Photo 16
Community members at Savoonga Dialogue meeting.

Photo 17
Gloria Kuloqiyi (center, red jacket) at Savoonga Dialogue meeting.

Photo 18
Community members at Savoonga Dialogue meeting.

Photo 19 and Photo 20
Joe Sarcone, ATSDR.

Photo 21
Thor Noongwook & Mitchell Kiyuklook, Savoonga.

Photo 22
Muffy Iya, Sylvia Toolie, Peggy Akeya, Merton Miklahook, Sr. (black hat), Thor Noongwook.

Photo 23
Myron Kingeekuk, Mayor of Savoonga (left).

Photo 24
Jeanette (Muffy) Iya, Sylvia Toolie, Peggy Akeya.

Photo 25
Verna Immingan (far left), Paul Rookuk, Sr. (middle, black hat).

Photo 26
(left) Mitchell Kiyuklook, President Savoonga Native Village. (right) Local ivory carvings.

Photo 27
Native drummers at Savoonga Fire Hall for community dancing.

Photo 28
Native drummers at Savoonga Fire Hall for community dancing.

Photo 29
Native drummers at Savoonga Fire Hall for community dancing.

Photo 30
Native drummers at Savoonga Fire Hall for community dancing.

Photo 31
Native drummers at Savoonga Fire Hall for community dancing.

Photo 32 and Photo 33
Native dancers and drummers at Savoonga Fire Hall for community dancing.

Photo 34
Paul Apangalook and Carey Cossaboom, USACE in Gambell.

Photo 35
Gambell community member and Col Koenig.

Photo 36
Willis Walunga in Gambell.

Photo 37
Gambell community member

Photo 38
(L to R) Sylvia Kawabata, Joe Sarcone, John Halverson, James Balocki, Curtis Dunkin, Matt Wilkening at Gambell Dialogue meeting.

Photo 39
Sylvia Kawabata, USEPA.

Photo 40
Carey Cossaboom, USACE (center).

Photo 41
Richard Koozata (left), Eddie Ungott (blue jacket), Paul Apangalook (far right), Matt Wilkening.

Photo 42
Col Koenig, USACE.

Photo 43
Col Koenig, Joe Sarcone, John Halverson, Sylvia Kawabata, James Balocki, Curtis Dunkin.

Photo 44
James Balocki, USACE.

Photo 45
James Balocki, USACE.

Photo 46
Community lunch.

Photo 47
Carey Cossaboom, USACE.

Photo 48
Ron Scrudato, Carey Cossaboom.

Photo 49
James Balocki, USACE.

Photo 50
Lisa Geist in the kitchen at the Q Building in Gambell.

Photo 51
Matt Wilkening in Gambell.

Photo 52
Richard Koozata (black hat) in Gambell.

Photo 53
Paul Apangalook in Gambell.

Photo 54
Jennifer Currie, Amanda Shearer, Lisa Geist in Gambell.

Photo 55
Melvin Apassingok in Gambell.

Photo 56
Melvin Apassingok and Ron Scrudato in Gambell.

Photo 57
Willis and Nancy Walunga in Gambell.

Photo 58
Vi Waghiyi in Gambell.

Attachment B

Savoonga Dialogue Meeting Agenda

Agenda

PUBLIC MEETING TO DISCUSS
ENVIRONMENTAL HEALTH AND CLEANUP ISSUES
Native Village of Savoonga

Tuesday, December 13, 2011

10:15 a.m. Welcome and Opening Prayer
- Morris Toolie, Sr., Elder Advisor

10:25 a.m. Introductions of Meeting Attendees
- Kristi Parker Celico, Facilitator

10:35 a.m. Opening Comments and Recognition of Annie Alowa
- Myron Kingeekuk, Mayor, City of Savoonga

10:45 a.m. Opening Comments
- Sylvia Kawabata, Office of Environmental Cleanup, US Environmental Protection Agency
- John Halverson, Contaminated Sites Program, Alaska Department of Environmental Conservation
- Colonel Reinhard Koenig, District Commander, US Army Corps of Engineers
- James Balocki, Headquarters, US Army Corps of Engineers

11:15 a.m. Review of Meeting Purpose, Agenda, and Ground Rules
- Kristi Parker Celico, Facilitator

Proposed Meeting Purpose:
- Discuss environmental cleanup plans at NE Cape.
- Discuss the human health issues related to environmental problems.
- Discuss ways to improve communication between the Army Corps, the tribal government, state government, Restoration Advisory Board, and the community regarding cleanup issues.
- Determine any collaborative next steps.

Proposed Ground Rules:
- Be respectful of each other.
- Identify solutions to problems.
- Avoid acronyms to the extent possible.

Cleanup of Northeast Cape

11:20 a.m. Overview of Cleanup at Northeast Cape
- Carey Cossaboom, Project Manager, US Army Corps of Engineers

11:35 a.m. EPA Review of the Army Corps Cleanup
- Matt Wilkening, Project Manager, US EPA Region 10

11:50 a.m. Overview of Native American Lands Environmental Management Program
- Robert Annogiyuk, Project Manager, NALEMP Program

12:00 noon Discussion
- Questions about the presentations
- What next steps concern community members the most?
- Ideas for moving forward to address these concerns?
- Summary of next steps

12:30 p.m. Break for lunch together

Environmental Health Concerns

1:45 p.m. Review of ACAT research on environmental and health impacts
- Vi Waghiyi, Environmental Health and Justice Program Director, Alaska Community Action on Toxics
- Ron Scrudato, Community Assistance Grant-advisor to communities

2:15 p.m. Review of previous ATSDR health consultations and response to community request for new public health assessment/consultation
- Joe Sarcone, Alaska Regional Representative, Agency for Toxic Substances Disease Registry (ATSDR)

2:30 p.m. Discussion
- Questions about the presentation
- What do we know about environmental health effects and causes?
- What do we need to know more about and who could assist?
- What could the agencies at the table do to help?
- Discussion of others who could help?
- Summary of next steps

Improving Communications

3:15 p.m. General Discussion
- Recommendations by Community Representatives
- Summary of Next Steps

3:45 p.m. Closing Remarks
- Ronnie Toolie, President, Native Village of Savoonga

3:55 p.m. Adjourn of Meeting

Attachment C

Gambell Dialogue Meeting Agenda

Agenda

PUBLIC MEETING TO DISCUSS
ENVIRONMENTAL HEALTH AND CLEANUP ISSUES
Native Village of Gambell

Wednesday, December 14

10:00 a.m. Welcome and Opening Prayer
- Gambell Community Elder

10:05 a.m. Introductions of Meeting Attendees
- Kristi Parker Celico, Facilitator

10:15 a.m. Opening Comments and Recognition of Annie Alowa
- Erica Apaki, Mayor, City of Gambell

10:25 a.m. Opening Comments
- Sylvia Kawabata, Office of Environmental Cleanup, US Environmental Protection Agency
- John Halverson, Contaminated Sites Program, Alaska Department of Environmental Conservation
- Colonel Reinhard Koenig, District Commander, US Army Corps of Engineers
- James Balocki, Headquarters, US Army Corps of Engineers

11:00 a.m. Review of Meeting Purpose, Agenda, and Ground Rules
- Kristi Parker Celico, Facilitator

Proposed Meeting Purpose:
- Review of military cleanup at Gambell. Discuss remaining concerns.
- Discuss the human health issues related to environmental problems.
- Discuss ways to improve communication between the Army Corps, tribal government, State government, the Restoration Advisory Board and the community regarding cleanup issues.
- Determine any collaborative next steps.

Proposed Ground Rules:
- Be respectful of each other.
- Identify solutions to problems.
- Avoid acronyms to the extent possible.

Cleanup of Military Waste at Gambell

11:05 a.m. Overview of Cleanup in Gambell
- Carey Cossaboom, Project Manager, US Army Corps of Engineers

11:20 a.m. EPA Review of the Army Corps Cleanup
- Matt Wilkening, Project Manager, US EPA Region 10

11:35 a.m. Overview of Native American Lands Environmental Management Program
- Paul Apangalook, Project Manager, NALEMP Program

11:45 p.m. Discussion
- Questions about the presentations
- Identify remaining concerns about the military cleanup
- Ideas for moving forward to address these concerns?
- Summary of next steps

12:15 p.m. Break for lunch together

Environmental Health Concerns

1:45 p.m. Review of ACAT research on environmental and health impacts
- Vi Waghiyi, Environmental Health and Justice Program Director, Alaska Community Action on Toxics
- Ron Scrudato, Technical Assistance Grant-Advisor to Communities

2:15 p.m. Review of previous ATSDR health consultations and response to community request for new public health assessment/consultation
- Joe Sarcone, Alaska Regional Representative, Agency for Toxic Substances Disease Registry (ATSDR)

2:30 p.m. Discussion
- Questions about the presentations
- What do we know about environmental health effects and causes?
- What do we need to know more about and who could assist?
- What could the agencies at the table do to help?
- Discussion of others who could help?
- Summary of next steps

Improving Communications

3:15 p.m. General Discussion
- How to improve communications between the Army Corps, tribal government, state government, Restoration Advisory Board, and community regarding decisions going forward.

3:45 p.m. Closing Remarks
- Paul Apangalook, President, Sivuqaq, Inc.

3:55 p.m. Adjourn of Meeting

Attachment D

USACE Northeast Cape presentation slides

Northeast Cape
Formerly Used Defense Site (FUDS)
&
Native American Lands Environmental Mitigation Program (NALEMP)

Dialogue Meeting

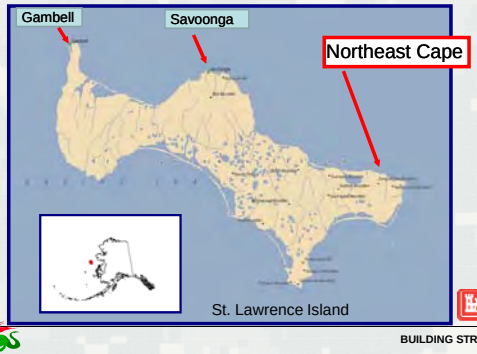
Carey Cossaboom
Project Manager

December 13, 2011

US Army Corps of Engineers
BUILDING STRONG®

FUDS Building and Preserving Alaska s Future

Site Location



FUDS
BUILDING STRONG®

Installation Dates & Size

The Northeast Cape site was used by the military from the mid-1950s to the early 1970s. The original military site was designed to support 212 people.

FUDS
BUILDING STRONG®

Air Force Station – Main Operations Area

NE Cape

FUDS
BUILDING STRONG®

Installation Purpose

Northeast Cape was a surveillance station, providing radar coverage for the Alaskan Air Command, and later for the North American Air Defense Command, as part of an Alaska-wide system (White Alice) constructed to reduce potential vulnerability to bomber attacks across the Arctic region.

FUDS
BUILDING STRONG®

Sites 33 and 34 – Upper Mountain

FUDS
BUILDING STRONG®

Brief Cleanup History

1985 -1986 : USACE contractor (URS Consultants) conducts a preliminary reconnaissance for the Alaska District.

1990 : URS Consultants conducts a removal action under the Navy's CLEAN Sites program at the White Alice site, including removal of hazardous waste, transformers, electrical equipment, storage drums and gas cylinders.

Brief Cleanup History (cont.)

1991: URS Consultants prepares Site Inspection Report with initial sampling data for the White Alice site. USACE contractor (Ecology and Environment) completes an inventory of materials deemed eligible for either investigation or cleanup under FUDS.

1992 : Ecology and Environment prepares the Chemical Data Acquisition Plan (CDAP) outlining the sampling required to characterize and delineate the extent of contamination at eligible sites.

Brief Cleanup History (cont.)

1994 : USACE contractor (Montgomery Watson) completes a Remedial Investigation Report. The report recommends further sampling at various sites. USACE contractor (Northwest Environmental Services) conducts a concurrent interim removal action and removes 16 transformers from the main site.

1995 : Montgomery Watson conducts a debris inventory of the Northeast Cape site, to help design future removal actions.


Main Operations Complex – view north

Brief Cleanup History (cont.)

1996 : Montgomery Watson performs a Phase II Remedial Investigation to fill in data gaps identified in the initial RI Report.

1997 : A subcontractor for Montgomery Watson removes dangerous wire previously identified in the 1995 debris inventory.

1998 : Montgomery Watson collects additional soil, water and sediment samples from the drainage basin below the Main Operations Complex (MOC) leading to the Suqitughneq (Suqi) River.


Drilling Crew

Brief Cleanup History (cont.)

1999 : Montgomery Watson samples building materials for PCBs and lead, documents structures to meet State Historical Preservation Office (SHPO) requirements, conducts a utilidor survey, collects additional background samples, and conducts an ecological assessment of the drainage basin and Suqi River.

Brief Cleanup History (cont.)

2000 : A Restoration Advisory Board (RAB) is established. Montgomery Watson conducts an asbestos and lead paint survey at the White Alice site.

USACE contractor (Nugget Construction) initiates building demolition and debris removal project (BD/DR). Retrieves and processes 6,100 scattered drums, removes 60 tons of miscellaneous debris, cleans and demolishes 19 above-ground storage tanks (ASTs), removes a 4" diameter pipeline from Cargo Beach to the Main Operations Complex.

Brief Cleanup History (cont.)

2001 : USACE contractor (Montgomery Watson Harza) conducts Phase III Remedial Investigation to address additional comments received from stakeholders.

Nugget Construction removes additional containerized hazardous waste, completes removal of 3 underground storage tanks (USTs) and associated fuel piping, removes 17 ASTs, excavates PCB-contaminated soils near former power plant, and demolishes approximately 50% of the buildings at the Main Operations Complex.


Fish Sampling 2001

Brief Cleanup History (cont.)

2002 : The Alaska District conducts an Engineering Evaluation/Cost Analysis for remaining demolition work. A June 2002 report by the U.S. Environmental Protection Agency (EPA) indicates that the USACE is proceeding with work at Northeast Cape in a manner that is consistent with EPA expectations for hazardous waste sites.

2003: USACE contractor (Bristol Environmental) demolishes most of the remaining site structures including the White Alice parabolic antennas.

Brief Cleanup History (cont.)

2004 : Montgomery Watson Harza finalizes a Human Health and Ecological Risk Assessment for the military installation at Northeast Cape. USACE contractor (Shannon & Wilson) conducts additional field investigations (Phase IV Remedial Investigation) per request of the community Restoration Advisory Board (RAB).

2005 : Bristol Environmental completes all demolition of structures on site, including the tram towers.

Brief Cleanup History (cont.)

2006-2007 : USACE prepares Feasibility Study and Proposed Plan that describes potential remedial alternatives, and their comparative costs, for addressing the contaminated soil and groundwater at Northeast Cape. USACE contractor (R&M Consultants) conducts geophysical survey at the Site 7 Landfill.

2008 : USACE issues Decision Documents for overall site cleanup and Site 7 Landfill projects.

Brief Cleanup History (cont.)

2009 : Bristol Environmental removes drums from, and re-caps, the Site 7 Landfill. Bristol subcontractor, AECOM, conducts Phase I chemical oxidation treatment of petroleum contaminated soil and groundwater at the former Main Operations Complex. The chem-ox proves unsuccessful.

2010 : Bristol Environmental excavates POL, PCB, and As soils from 8 sites for off-island removal, completing 5 sites. Bristol caps the Site 9 Landfill, and removes tons of poles and wire.

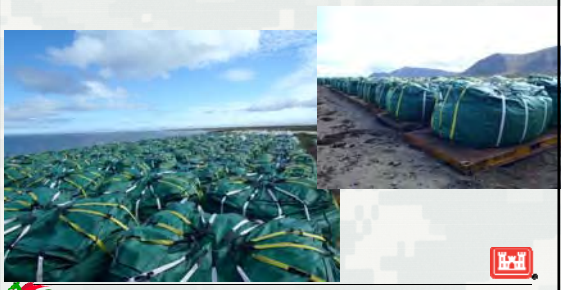
Site 7 Landfill

Chemical Oxidation Injection Well (2009)

Brief Cleanup History (cont.)

2011 : Bristol Environmental begins excavation of POL soils in the Main Operations Complex (MOC) for off-island removal, and continues excavation of PCB-contaminated at two remaining sites. Bristol conducts surveying in drainage basin below MOC in preparation for remedial actions.

Supersacks at Cargo Beach Staging Area



FUDS 31 BUILDING STRONG®

Native Village of Savoonga NALEMP

FY09 Cooperative Agreement

1. Develop Strategic Project Implementation Plan (SPIP)
2. Asbestos and lead-based paint survey of collapsed buildings at Native Village of Northeast Cape (Fish Camp)

FUDS 32 BUILDING STRONG®

Debris of collapsed cabin

Native Village of Savoonga NALEMP

FY11 Cooperative Agreement

Abatement and removal of all collapsed cabins and abandoned cabins from the Native Village of NE Cape (Fish Camp)

- ► Burning of non-painted wood
- ► Removal of lead-based painted wood and asbestos waste from St. Lawrence Island
- ► Stacking of debris piles (for future removal)

FUDS 34 BUILDING STRONG®

Burning non-painted wood

Robert Annogiyuk (PM) and NALEMP crew

Attachment E

USEPA Northeast Cape presentation slides

EPA Review of Cleanup at NE Cape, Alaska

History of Cleanup

- 1972 – NE Cape (2560 acres) closed becomes Formerly Used Defense Sites (FUDS).
- 1985 – ACOE begins investigations of FUDS Continues intermittently to present.
- ACOE identified 22 sites w/contamination mostly petroleum, some PCB & 11 NFA.
- ACOE spent $62 million by end of 2010 field season.
- ACOE cleanup continues through 2012.

History of Cleanup (cont'd) EPA Involvement

- 2002 – EPA reviewed ACOE work. Work consistent with EPA's expectations.
- 2009 – ACAT letter to EPA noted concerns about ACOE cleanup at NE Cape – mainly PCBs.
- June 2010, EPA Region 10 begins review.
- December 2011, Draft Report of Findings completed.

EPA Findings

- Cleanup generally followed EPA guidance ADEC provided regulatory oversight.
  - Exceptions: Use of background concentrations of metals and risk assessment.
  - Eco-risk assessment lacks aquatic species.
- Conclusions – does not affect the conclusions in the risk assessment. Cleaning up sites to address human health concerns should also address eco-risk.

EPA Findings (cont'd)

- PCB cleanup (1 mg/kg) is adequate
  - Meets EPA soil cleanup criteria (0.14-14.0 mg/kg)
  - Elevated concentrations of PCBs in marine mammals (27.20-353.95 ug/kg) exceed EPA fish tissue criterion 1.5 ug/kg (cancer effects) or 5.9 ug/kg (noncancerous effects)

Groundwater at MOC

EPA Findings (cont'd)

- Groundwater Issues & Monitored Natural Attenuation (MNA)
  - Accepted cleanup for diesel fuel contamination.
  - Long term monitoring required to track progress.
  - Conceptual Site Model should be developed.
  - Consider adding oxidizer to groundwater to create oxygen-rich environment to enhance diesel breakdown.
  - Five-year review necessary. ACOE will do this.

Cargo Beach Landfill

EPA Findings (cont'd)

- Cargo Beach Landfill
  - Capping site consistent w/ EPA approach to landfill.
  - ACOE removed the gross contamination.
  - No sampling to indicate whether remaining soil is contaminated.
  - Need long-term monitoring of landfill to ensure cap remains intact and no intrusions into site since contamination may remain on site.
  - Five-year reviews necessary.

Conclusions

- Long-term monitoring and Five-Year Reviews required for groundwater at Main Operations Complex and Cargo Beach Landfill.
- Develop conceptual site model for MNA at the MOC groundwater site.
- Need most recent data on study of surface water at site.
- Invite ATSDR to review data since 2002 Overview Report.

Questions?

Attachment F

USACE Gambell presentation slides

GAMBELL
Formerly Used Defense Site (FUDS)
&
Native American Lands Environmental Mitigation Program (NALEMP)

Dialogue Meeting

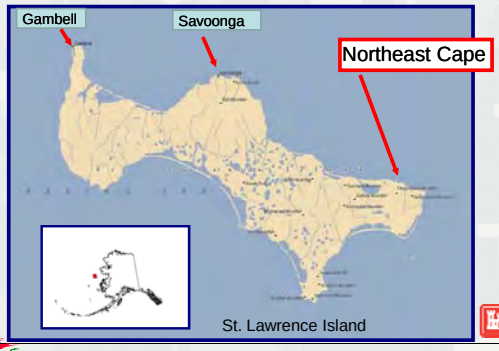
Carey Cossaboom
Project Manager

December 14, 2011

US Army Corps of Engineers
BUILDING STRONG®

FUDS Building and Preserving Alaska's Future

Site Location



FUDS

BUILDING STRONG®

Installation Overview

The Gambell site was used by the military from 1948 to the late 1950s when similar facilities were constructed at NE Cape.

Military activities included an aircraft control and warning station, and an Army installation for several hundred people. At the close of military operations, all military structures were demolished, and the debris buried on-site.

FUDS 3 BUILDING STRONG®

FUDS Cleanup History

1985 – 1986 : USACE contractor (URS Consultants) conducts a preliminary site reconnaissance at Gambell, including collection of water samples, soil samples, and geophysical surveying

1992 : USACE contractor (Ecology and Environment) conducts an inventory of materials deemed eligible for investigation or cleanup under FUDS. Following a site reconnaissance and interviews with local residents, they identify 18 eligible sites

FUDS 4 BUILDING STRONG®

FUDS Cleanup History (cont.)

1994: USACE contractor (Montgomery Watson) conducts a remedial investigation at 18 sites based on Ecology and Environment 's inventory

1996 - 1997 : Montgomery Watson conducts fieldwork for a Phase II remedial investigation, collects visible surface debris along the North beach

FUDS 5 BUILDING STRONG®

FUDS Cleanup History (cont.)

1994 : USACE contractor (Montgomery Watson) conducts a remedial investigation at 18 sites based on Ecology and Environment 's inventory

1996 - 1997 : Montgomery Watson conducts fieldwork for a Phase II remedial investigation, collects visible surface debris along the North beach

1998 : Montgomery Watson conducts fieldwork at the village water well (Site 5), including installation of soil borings and monitoring wells

FUDS 6 BUILDING STRONG®

FUDS Cleanup History (cont.)

1999 : USACE contractor (Oil Spill Consultants) performs building debris and exposed drum removal from various sites

2000 : USACE contractor (Earth Tech) conducts electromagnetic surveys over the north end of frozen Troutman Lake in May. Other land areas are surveyed in July. 800 .30-caliber rounds are removed from Area D.

FUDS Cleanup History (cont.)

2001 : Earth Tech surveys the remaining area of Troutman Lake; geophysical equipment is pulled over 200 line miles atop the lake ice. In August, the lakebed anomalies are investigated over open water via boat traverses using an underwater video camera and dredge probes. No evidence of OE is found. Results presented in Engineering Evaluation/Cost Analysis (EE/CA) Report (2002)

Montgomery Watson conducts a supplemental remedial investigation at various sites

Photograph 3-6. Sub-ice Anomaly Investigation

FUDS Cleanup History (cont.)

2004 : USACE completes a Feasibility Study and a Proposed Plan on the Gambell area sites. Of the 38 sites identified in Gambell, 35 are declared as requiring No Further Action, either because remediation and/or debris removal is complete, identified contamination is not significant, or remaining debris is ineligible under FUDS.

Remaining debris is eligible under the NALEMP Program

Winnie James Giving Advice

FUDS Cleanup History (cont.)

2005 : USACE contractor (Bristol Environmental) remediates contaminated soil at two remaining FUDS sites and removes debris along runway

2006 : Bristol Environmental completes additional sampling (over the course of a year) at the Gambell water supply well area (Site 5). No contaminants of concern discovered

2007 : Bristol Environmental decommissions all remaining monitoring wells in Gambell

NALEMP Cleanup History

1999 - 2001: Develop and refine a Strategic Project Implementation Plan (SPIP)

2003 : Montgomery Watson conducts removal actions at Sites 6, 7 and 20 under the NALEMP Program

2004 – 2011 : The NVG assumes the managerial lead in conducting cleanup activities under the NALEMP Program. Debris is excavated and shipped off-island from nearly all of the 18 sites in the SPIP

Montgomery Watson at Site 6 (2003)

Gerald Soonagrook
NVG NALEMP PM
2004-2007


Richard Koozaata
NVG NALEMP PM
2008-2011

Attachment G

USEPA Gambell presentation slides

EPA Review of Cleanup at Gambell, Alaska

History of Cleanup

- Late 1950s Gambell Site (2543 acres) closed, becomes Formerly Used Defense Site (FUDS).
- Late 1980s ACOE begins intermittent investigation at Gambell FUDS site.
- ACOE identified 38 sites of suspect contamination, cleanup required at 3.
- 2008 ACOE completes cleanup at site. Cost $11.5 million.

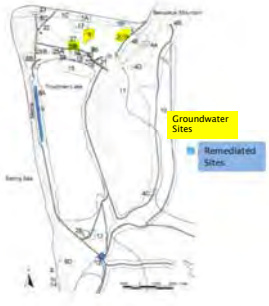
History of Cleanup (cont'd) EPA Involvement

- 2009 – ACAT letter to EPA noted concerns about ACOE cleanup at Gambell – main issues groundwater contamination & debris.
- June 2010, EPA Region 10 begins review
- December 2011, Draft Report of Findings completed and issued.

Issues and EPA Findings

- Cleanup generally followed EPA guidance.
- ADEC provided regulatory oversight.
- Main Issues
  - Groundwater
  - Debris Left On Site
  - Munitions

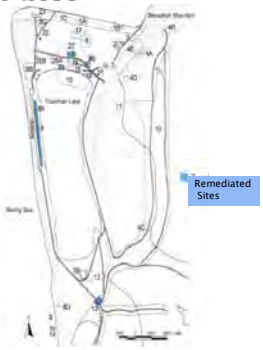
Groundwater Issues



EPA Findings (cont'd)

- Groundwater Investigation is appropriate.
  - Site 2, Drinking water aquifer – no contamination above drinking water standards (MCLs).
  - Site 6 and Site 7 groundwater w/ contamination above MCLs. GW – not sufficient quantity/quality for drinking water source. Elevated concentrations due to sample turbidity.
  - GW at base of Savuokuk Mt not at risk from residual dioxins at radar site on summit.

Debris On Site



EPA Findings (cont'd)

- Debris on site
  - ACOE removed Marsten matting and other non-hazardous debris from airstrip and other sites.
  - NALEMP program addressed others areas; example: 2008/9 debris removal at school site.
  - EPA would not address debris unless it represented a hazardous waste.
  - EPA would not excavate under structures to remove debris – Issue w/ structural integrity

Munition Areas

EPA Findings (cont'd)

- Beach Burial Site 8D – Issue w/ 30 caliber rounds.
- 2008 – ACOE declared site clean following series of actions. Removes institutional controls (ICs).
- EPA disagrees. ICs should remain in place until site is swept w/ all metal detector, e.g. EM-61 which will detect brass casings and copper jacketed lead bullets.

Troutman Lake MEC Investigation

Photograph 3-3. Zonge Engineering Research NanoTEM.

EPA Findings (Cont'd)

- Troutman Lake Site – Munitions and Explosives of Concern (MEC),
- Individuals recalled lake site as location of mass disposal of MEC
- ACOE performed geophysical surveys on lake combined with depth sounding equipment, ice augers, underwater video and spot dredge
- EPA concurs w/ ACOE Unlikely MEC is present in lake sediment.

Conclusions

- Groundwater has been adequately investigated
  - Any filtered water sample results should be noted in a Gambell decision document
- EPA cleanup would not address debris, especially under buildings, since it's not hazardous material
- Beach burial site should remain under ICs until swept by all metal survey instrument and determined cleared
- Concurs w/ Troutman Lake MEC investigation and conclusion
- Invite ATSDR to review data since 2002 Overview Report

Questions?

Attachment H

ACAT presentation slides

Environmental Health Concerns on St. Lawrence Island

Vi Waghiyi
Environmental Health and Justice Program Director
Alaska Community Action on Toxics
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(907) 222-7714

Ronald J. Scrudato, Ph.D.
University at Albany and RAB Technical Advisor
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St. Lawrence Island Dialogue Meeting
December 13-14, 2011

ACAT Alaska Community Action on Toxics
www.akaction.org

- She was a keen and trained observer about the health of her people
- She observed higher rates of cancers among the people whose families lived and worked at Northeast Cape
- She witnessed miscarriages and low birth weight babies, especially among those families closely associated with Northeast Cape
- Her concerns were not taken seriously by state and federal agencies
- This is why we are here today

Annie Alowa
we remember her knowledge and forewarning as a respected community health aide and elder

Norton Sound Region

Specific Aims for Environmental Health and Justice for Norton Sound, Alaska Project

- Identify sources of contaminants, including those from military and long-range, atmospheric sources
- Describe past and current health problems
- Increase the capacity of the health care system in Norton Sound to properly diagnose and treat health effects linked with environmental contaminants
- Work toward responsible cleanup of contaminated sites and prevent new sources of contaminants
- Assist Norton Sound communities in securing training and tools needed to establish independent programs operated by the villages to monitor contaminants

Community-based Sampling Conducted at Gambell and Northeast Cape on St. Lawrence Island, Alaska

- Blood serum levels of PCBs and pesticides
- Air (PCBs, pesticides)
- Groundwater (VOCs)
- Surface water (PCBs, PAHs, pesticides)
- Edible plants (PCBs, pesticides)
- Sediment cores (PCBs, pesticides, trace metals)
- Traditional foods (PCBs, pesticides, trace metals)
- Community health survey (~700 completed)

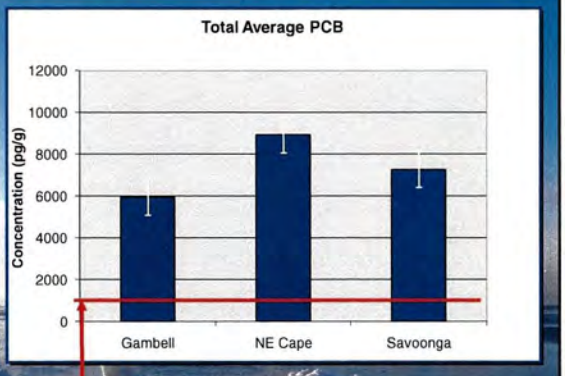
Disease Patterns Observed on St. Lawrence Island & Health Effects Associated with PCBs

- Cancers
- They weaken the immune system
- They increase risk of diabetes, high blood pressure and heart disease
- Diabetes
- Low birth weight babies, premature births, still births, miscarriages
- They interfere with neurodevelopment, nervous system function, and IQ
- They alter hormone systems, including the thyroid and reproductive hormones and other reproductive health problems



PCBs in Blood Serum of St. Lawrence Island People

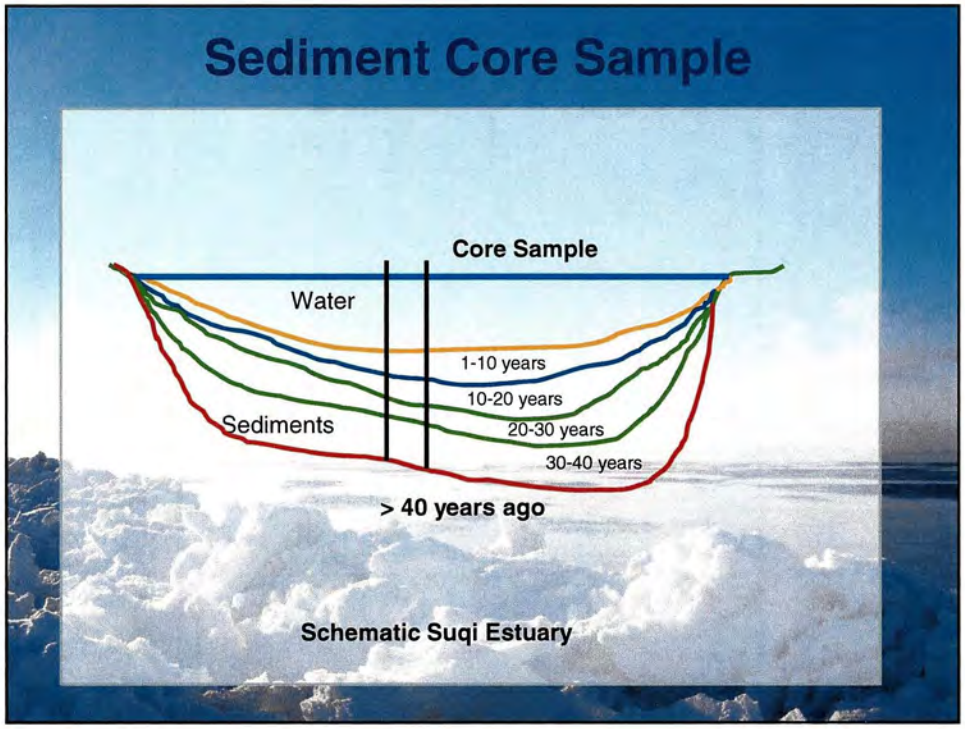
- Levels of PCBs in the blood of St. Lawrence Island Yupik people **6-9 times higher** than average in lower-48 populations
- Evidence of PCBs accumulating in the Arctic via global transport
- Military contamination also a significant source
- Published in the *International Journal of Circumpolar Health* (Carpenter et al., 2005)

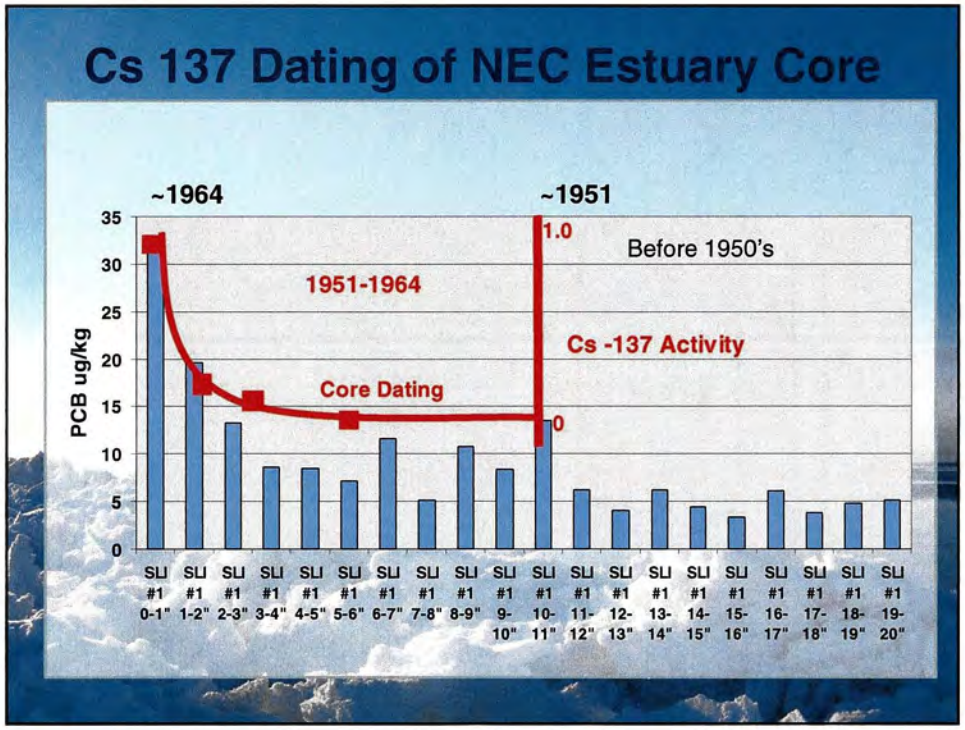


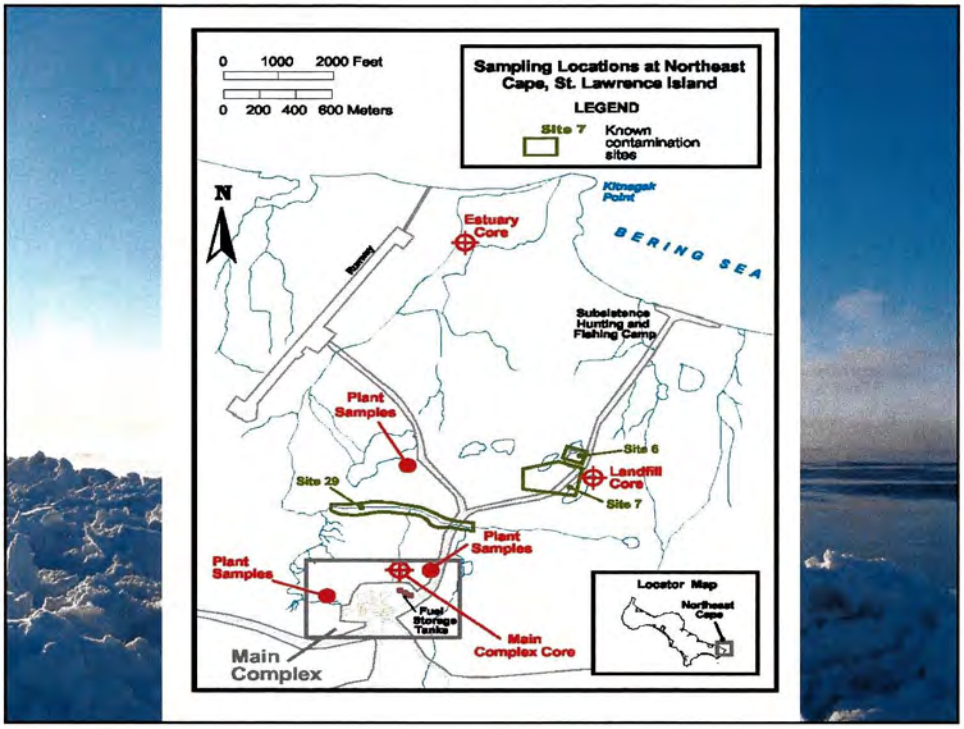
Average for populations in the Lower 48

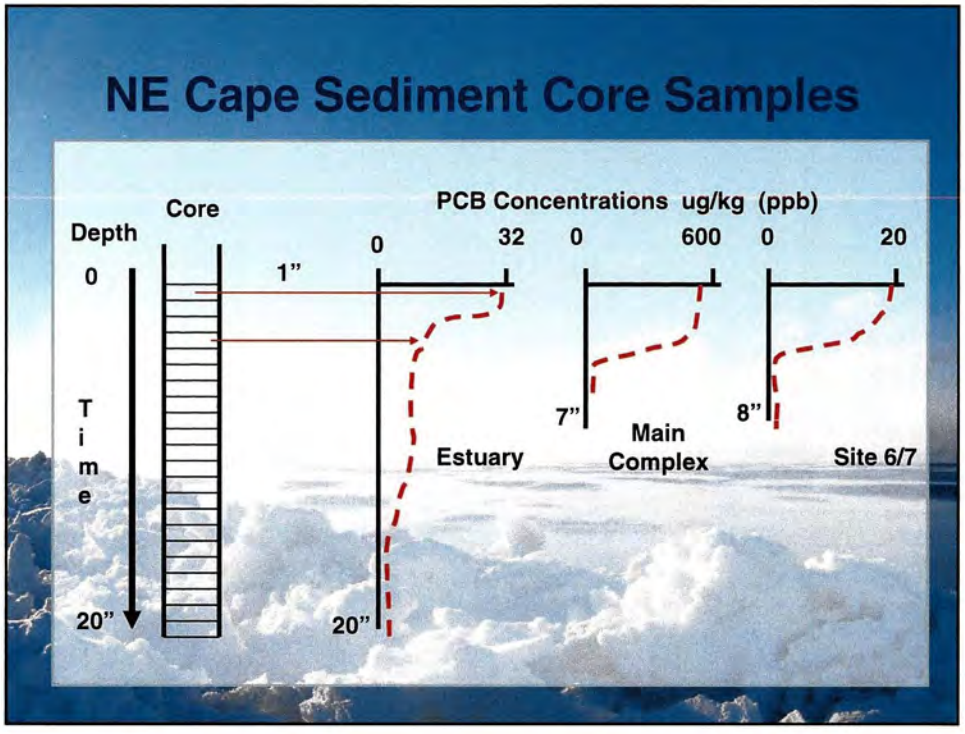
Contaminants of Concern in Plant and Sediment Core Samples

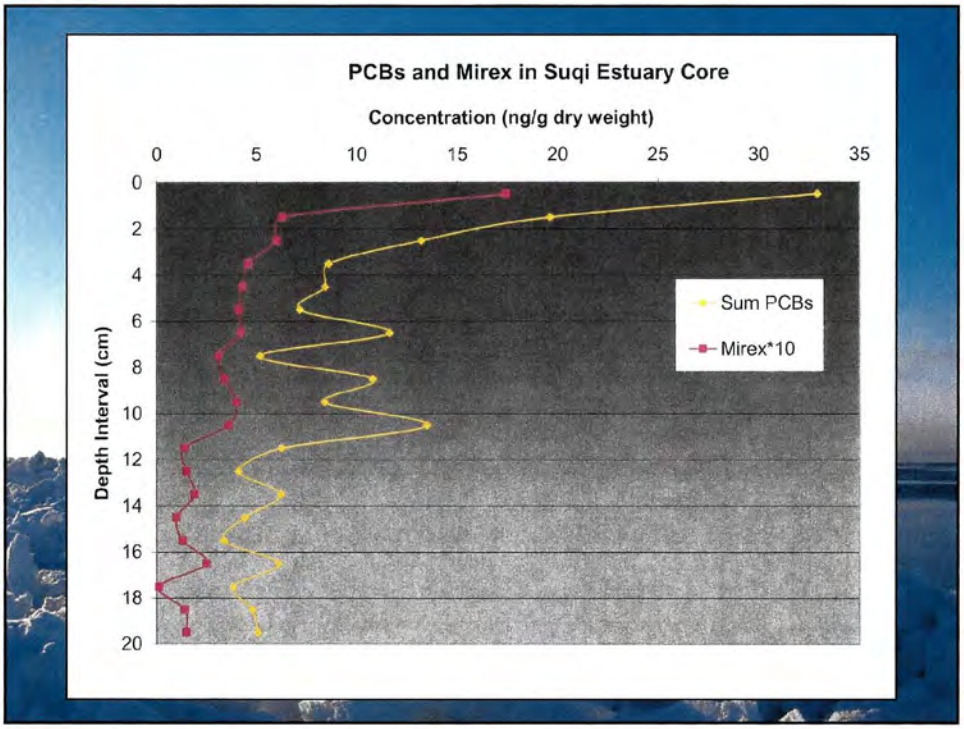
- **PCB's**
  - **Congener Specific (209 congeners)**
- **HCB**
- **DDE**
- **Mirex**
- **Select Trace Metals (Mercury)**
  - **Sampled only on SLI (2002)**
  - **Other metals-AK Norton Sound Mainland**

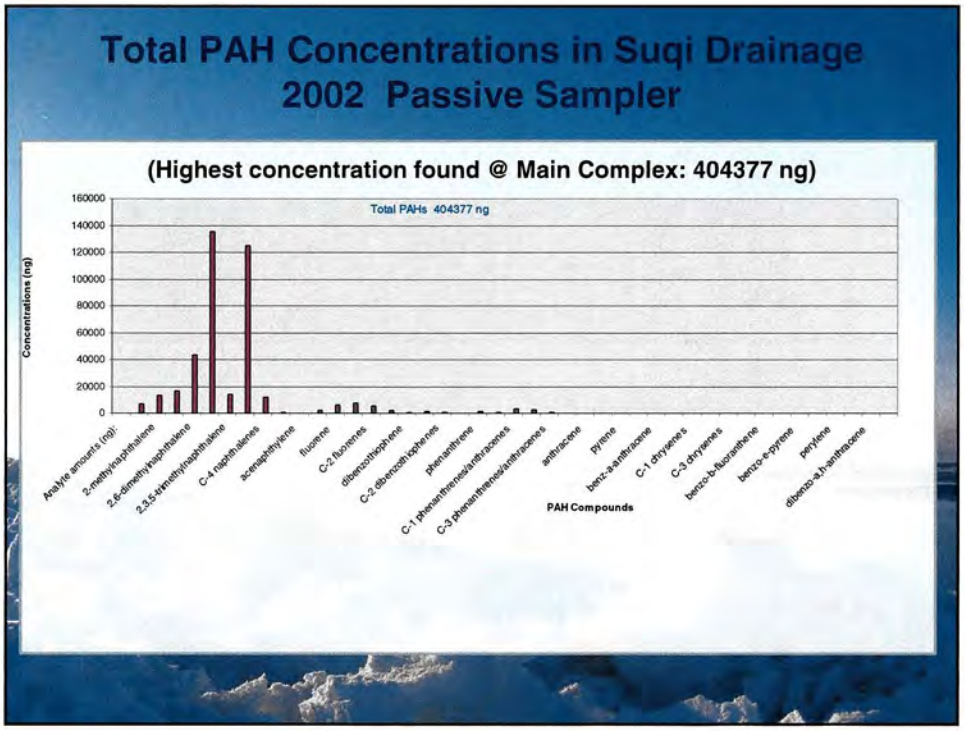

Sediment Core Sample
Core Sample
Water
1-10 years
10-20 years
Sediments
20-30 years
30-40 years
> 40 years ago
Schematic Suqi Estuary


Cs 137 Dating of NEC Estuary Core
~1964
~1951
1.0
Before 1950's
1951-1964
Cs -137 Activity
Core Dating
0
PCB ug/kg
35
30
25
20
15
10
5
0
SLI #1 0-1"
SLI #1 1-2"
SLI #1 2-3"
SLI #1 3-4"
SLI #1 4-5"
SLI #1 5-6"
SLI #1 6-7"
SLI #1 7-8"
SLI #1 8-9"
SLI #1 9-10"
SLI #1 10-11"
SLI #1 11-12"
SLI #1 12-13"
SLI #1 13-14"
SLI #1 14-15"
SLI #1 15-16"
SLI #1 16-17"
SLI #1 17-18"
SLI #1 18-19"
SLI #1 19-20"

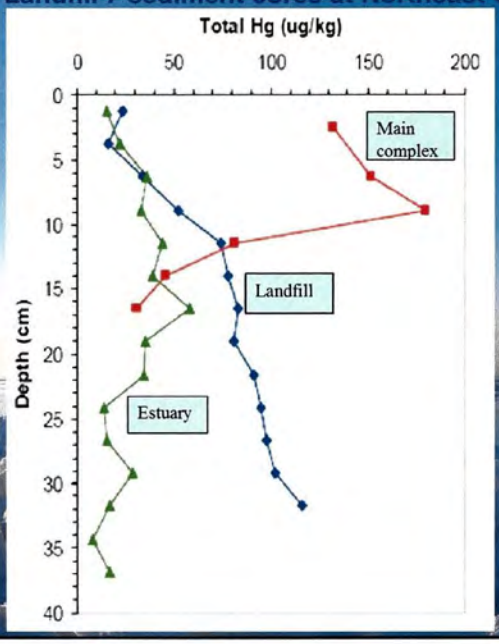

0 1000 2000 Feet
0 200 400 600 Meters
Sampling Locations at Northeast Cape, St. Lawrence Island
LEGEND
Site 7
Known contamination sites
N
Kinegak Point
Estuary Core
BERING SEA
Runway
Subsistence Hunting and Fishing Camp
Plant Samples
Site 6
Landfill Core
Site 29
Site 7
Plant Samples
Plant Samples
Fuel Storage Tanks
Main Complex Core
Main Complex
Locator Map
Northeast Cape


NE Cape Sediment Core Samples
Depth
Core
PCB Concentrations ug/kg (ppb)
0
32
0
600
0
20
0
1"
Time
20"
20"
7"
8"
Estuary
Main Complex
Site 6/7


PCBs and Mirex in Suqi Estuary Core
Concentration (ng/g dry weight)
0
5
10
15
20
25
30
35
Depth Interval (cm)
0
2
4
6
8
10
12
14
16
18
20
Sum PCBs
Mirex*10


Total PAH Concentrations in Suqi Drainage
2002 Passive Sampler
(Highest concentration found @ Main Complex: 404377 ng)
Total PAHs 404377 ng
Concentrations (ng)
160000
140000
120000
100000
80000
60000
40000
20000
0
Analyte amounts (ng):
2-methylnaphthalene
2,6-dimethylnaphthalene
2,3,5-trimethylnaphthalene
C-4 naphthalenes
acenaphthylene
fluorene
C-2 fluorenes
dibenzothiophene
C-2 dibenzothiophenes
phenanthrene
C-1 phenanthrenes/anthracenes
C-3 phenanthrenes/anthracenes
anthracene
pyrene
benz-a-anthracene
C-1 chrysenes
C-3 chrysenes
benzo-b-fluoranthene
benzo-e-pyrene
perylene
dibenzo-a,h-anthracene
PAH Compounds

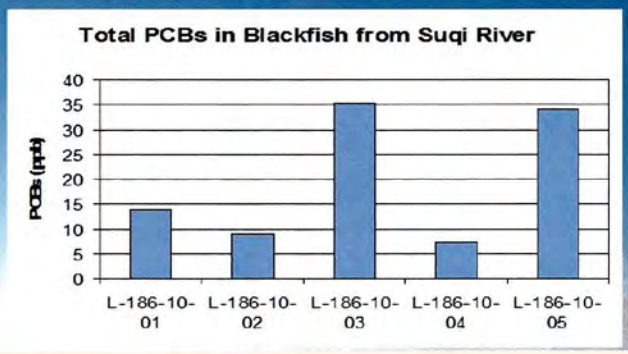
Mercury concentrations in the Main Complex, Suqi River Estuary and Landfill 7 sediment cores at Northeast Cape



Range of Sediment Core PCB Concentrations

Locations	Total PCB (ug/Kg)
NEC:	
Main Comp.	5-550
Site 7	5-19
Suqi Estuary	5-33
SLI Remote:	
Atuk Vol. (Savoonga)	<5
Collier Lag. (Savoonga)	<5
Norton Sound:	
Elim	<15
Unalakleet	<15
Wales	<5

Blackfish Samples from the Suqi River



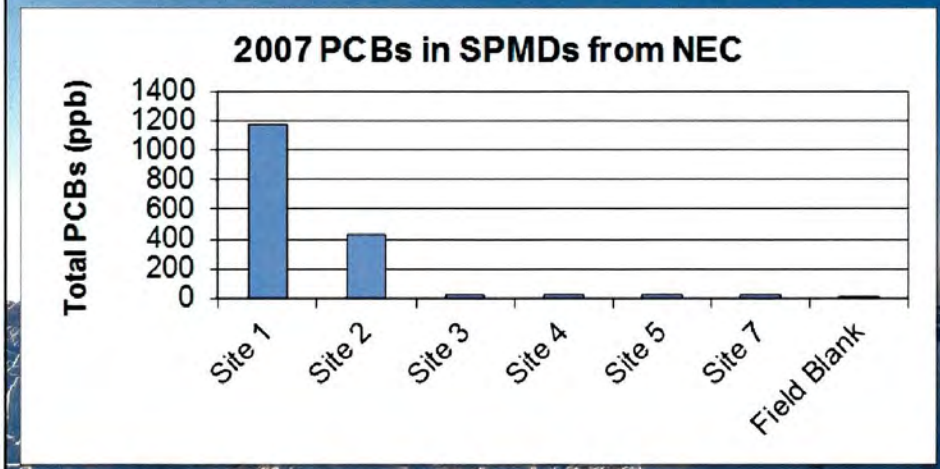
5 blackfish from Suqi River, range from 7-35 ppb total PCBs ng/g ww (ppb)

THE BLACKFISH OF ALASKA.

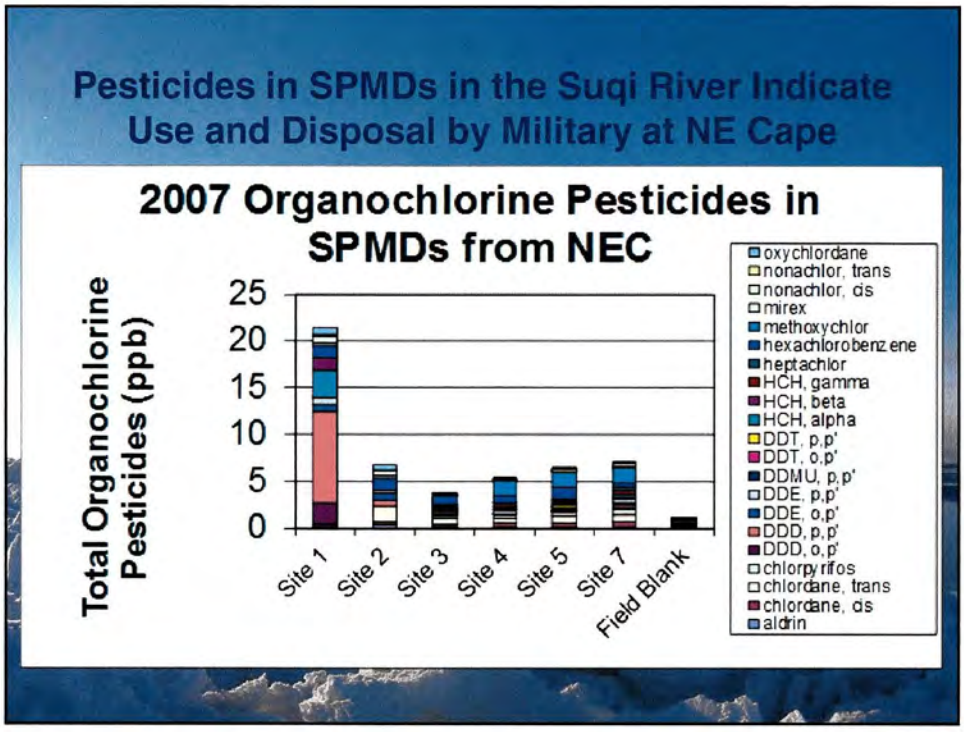
Dallia pectoralis, Bean. (p. 466.)

PLATE 188.

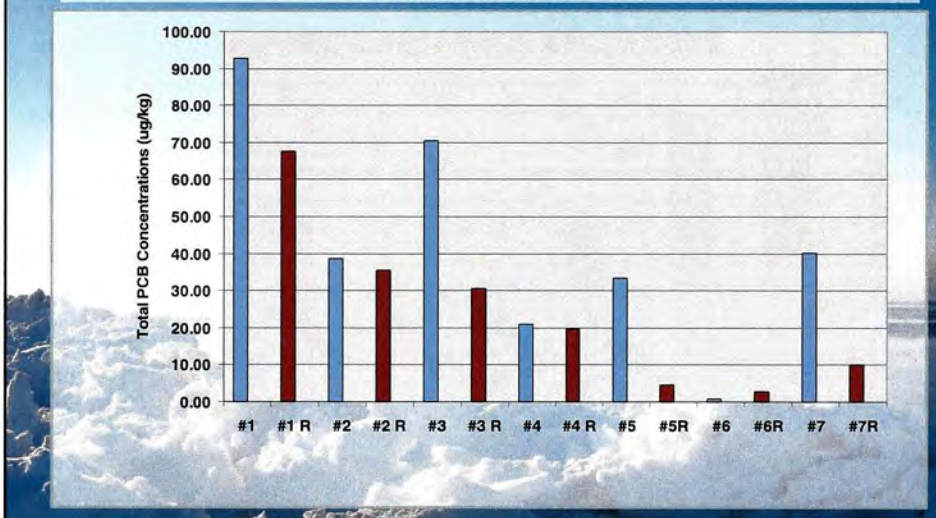
Levels of PCBs in Semi-Permeable Membrane Devices (SPMDs) from the Suqi River



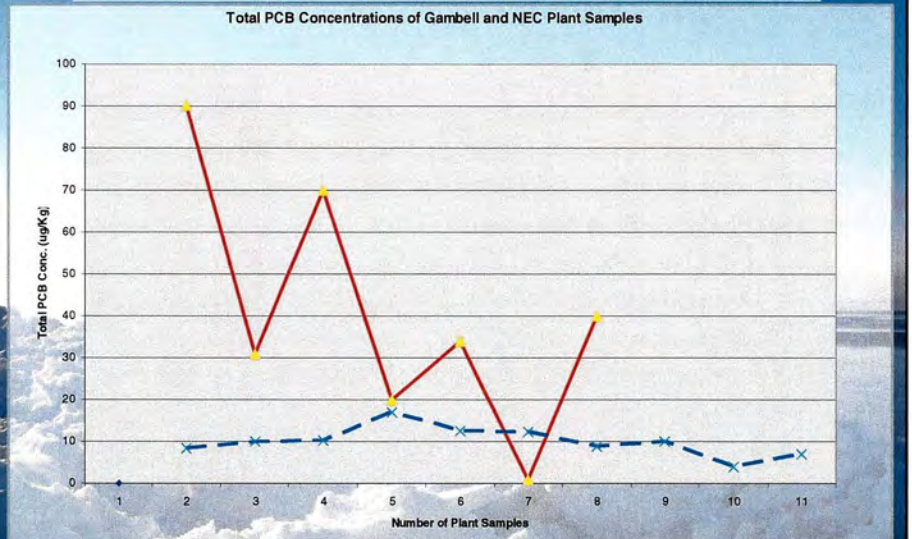
Pesticides in SPMDs in the Suqi River Indicate Use and Disposal by Military at NE Cape



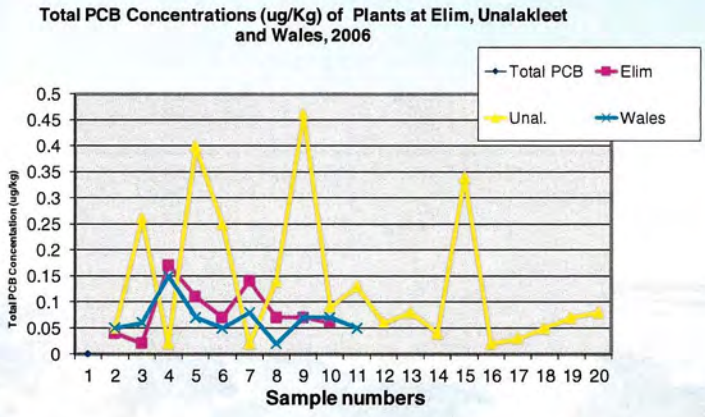
Unwashed and Washed Plant Sample PCB Concentrations NEC 2002



Total PCB Gambell and NEC Plants



Plant PCB Concentrations in Elim, Unalakleet and Wales



St. Lawrence Island Summary

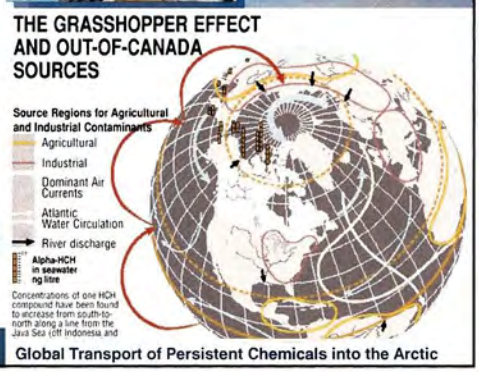
- SLI Remote:
  - Highest Concentrations of PCBs in sediments relative to Collier Lagoon, Atuk Volcano and Norton Sound FUDS
- NEC:
  - Highest PCB concentrations from Main Drainage at NEC
  - Washed/unwashed plants had similar PCB congener profiles
  - Washed Plants @ NEC reduced PCB concentrations
- Suqi Estuary & Drainage:
  - PCB concentrations reduced down gradient and over time
  - Aqueous phase PAHs in Suqi Drainage (MOC and North)
- Congener specific PCBs
  - Concentrations in sediment cores indicate local sources
  - Not global transport
- Plants (washed & unwashed) & Sediment Samples
  - Indicate remobilization of contaminants due to remediation

Norton Sound Summary

- Norton Sound FUDS:
  - Sediment Cores:
    - Less than 15 ppb PCB concentrations in core sediment samples
    - No evidence of Mirex, HCB, DDE in core sediment samples
  - Water Samples:
    - No evidence of organic or inorganic contaminants in water samples
  - Plant Samples:
    - Less than 1 ppb PCBs in plant samples
    - No evidence of Mirex, HCB, DDE in plant samples

Contaminants in the North

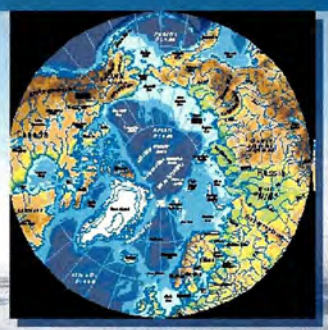
- The north has become a hemispheric sink for pesticides and other industrial chemicals
- Northern food webs favor the deposition and retention of persistent, bioaccumulative toxics
- Contaminants in the north threaten the health of peoples that rely on traditional diets of fish and marine mammals
- Global warming enhances the mobilization and transport of contaminants from local and distant sources



Global Transport of Persistent Chemicals into the Arctic

Current Use Chemicals in the Arctic

- Brominated flame retardants (PBDEs) doubling every 7 years in Arctic species. (Gabrielsen & Wolkers, 2004; *AMAP*, 2001)
- Current-use pesticides including endosulfan, trifluralin, triallate, chlorp yrifos, atrazine, and dacthal
- Fluorinated compounds



Traditional Foods Biomonitoring Project: Methods and Results

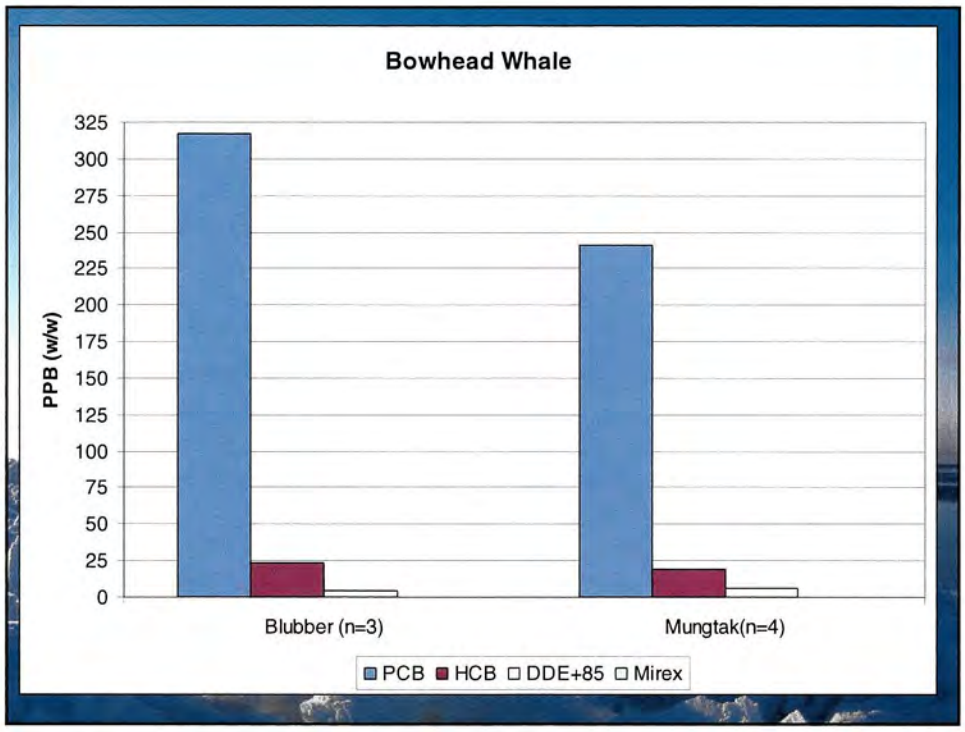
- Community Health Researchers on St. Lawrence Island collected food samples from local hunters from 2005-2009:
  - Fish, fowl, marine mammals, shellfish, reindeer
  - Meat, blubber, liver, kidney, intestines, rendered oils
  - Prepared and unprepared foods
- Samples analyzed for:
  - PCBs, mirex, DDE, HCB
- Some PCB levels higher than EPA fish consumption guidelines for cancer risk

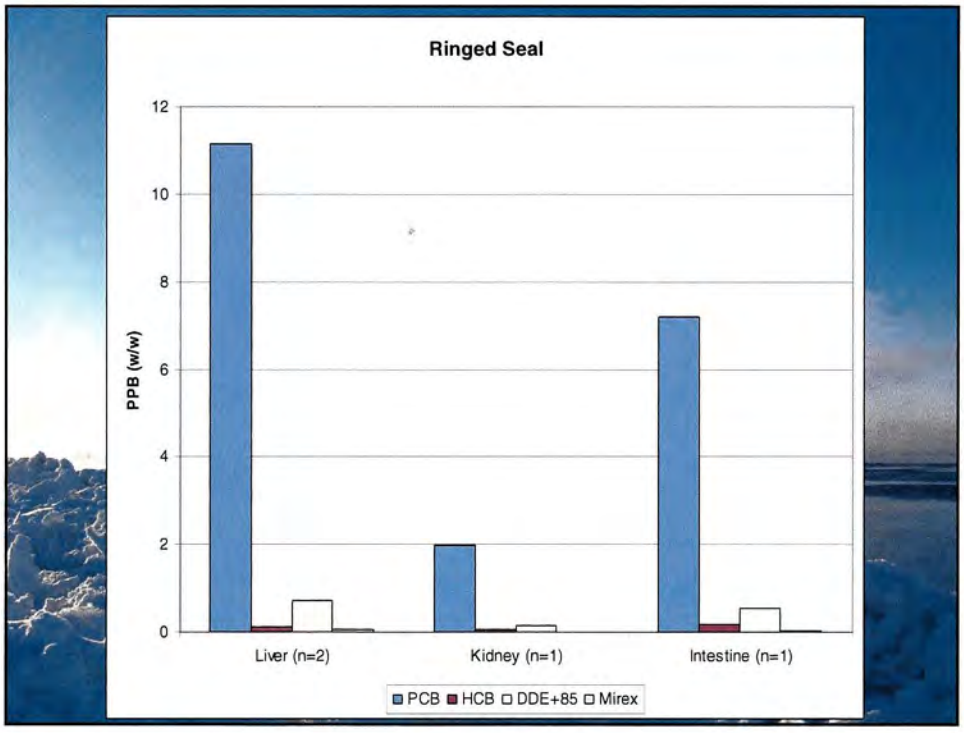
Rendered Oil

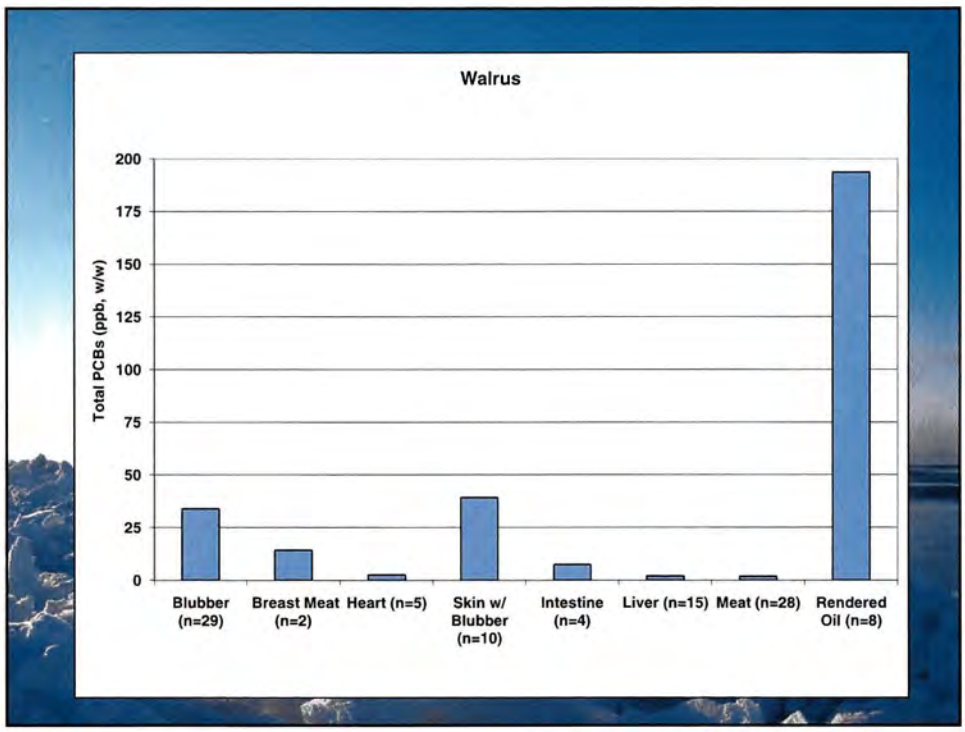
Range (202.6 – 451.1 ppb)

- Bowhead Whale 441.5 ppb
- Ringed Seal 451.1 ppb
- Walrus 265.4 ppb
- Spotted Seal 231.1 ppb
- Bearded Seal 202.6 ppb

*EPA risk-based unlimited consumption limit for PCBs in fish is 1.5 ppb


Bowhead Whale
PPB (w/w)
325
300
275
250
225
200
175
150
125
100
75
50
25
0
Blubber (n=3)
Mungtak(n=4)
PCB HCB DDE+85 Mirex


Ringed Seal
PPB (w/w)
12
10
8
6
4
2
0
Liver (n=2)
Kidney (n=1)
Intestine (n=1)
PCB HCB DDE+85 Mirex



EPA Fish Consumption Guidelines for PCBs

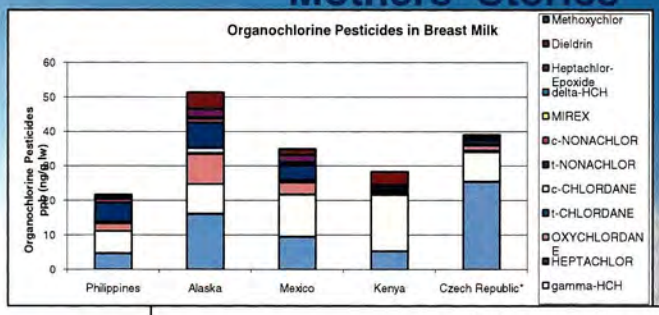
- Unlimited Consumption for non-cancer risks (all diseases except cancer): 5.9 ppb
- Unlimited Consumption for cancer risk: 1.5 ppb

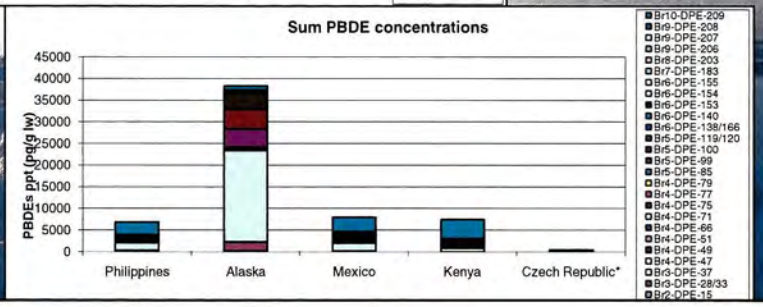
As the levels go higher, the EPA recommends fewer meals per month

Example of EPA's Guidelines

	100 ppb	300 ppb
Non cancer risk (diseases other than cancer)	No more than one meal a month	No more than one meal every other month
Cancer risk	Do not eat	Do not eat

Mother Earth; Mothers' Milk; Mothers' Stories





Birth Defects in Alaska

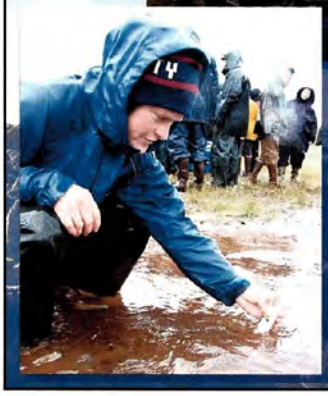
- **Data from the Alaska Birth Defects Registry shows:**
- Birth defects in Alaska are twice as high as in the United States as a whole
- Alaska Native infants have twice the risk of birth defects as white infants born in Alaska
- **Recommendations from the State of Alaska, Department of Public Health for women include:**
- Avoid contact with known or suspected environmental teratogens (agent that can cause a birth defect)
- **"...even independent of differences in cigarette smoking, alcohol consumption and maternal age—which is a well-known risk factor for birth defects—Alaska Natives still have an increased risk ... that we don't really know how to explain."**

Dr. Bradford Gessner, Maternal and Child Health Epidemiology unit

"Alaska Native infants have a much higher rate of hospitalization for infection than any other group of U.S. infants... Prenatal exposure to contaminants, which are known to affect the developing immune system, could play a role, and that possibility is now being examined."

- Dr. Jim Berner, pediatrician, Alaska Native Tribal Health Consortium

Implications for Public Health and Policy



- Independent research informs clean-up decisions
- Promoting proper diagnoses and treatment of environmental health effects
- Better oversight and holding military accountable for clean up
- Influencing public health policy to prevent exposures from this and other formerly used defense sites and long-range transport

Working toward a toxic-free future!

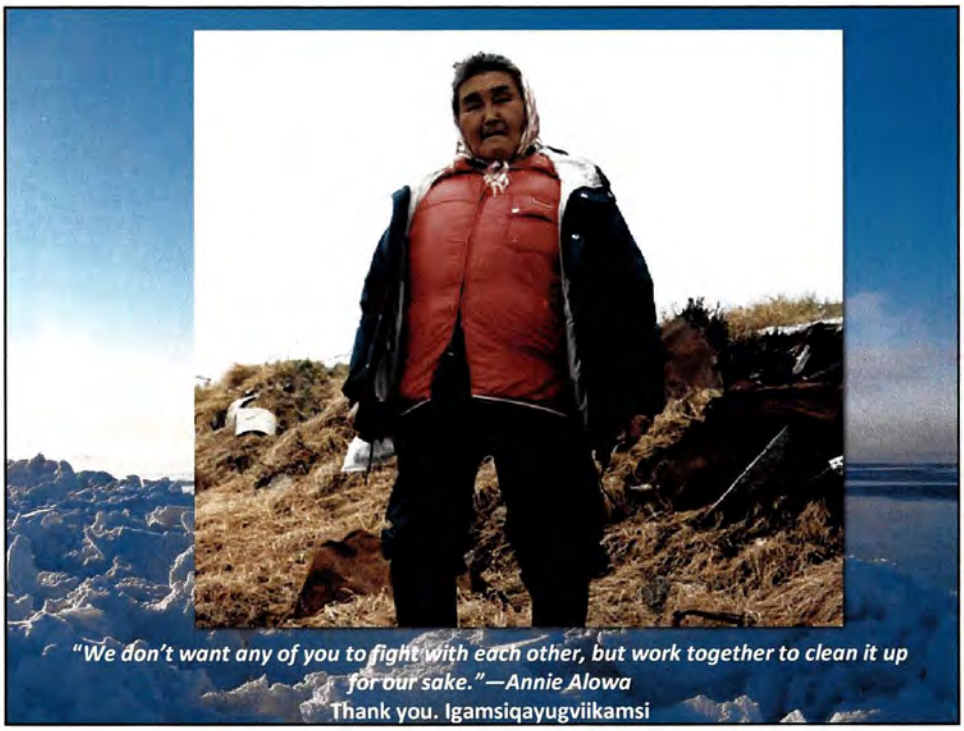
Youth, Elders and Community Health Researchers present results to U.S. Congress, EPA, Department of Defense

Actions needed for the protection of health and environment

- Reduce and eliminate sources of on-going exposure from the military sites at NE Cape and Gambell) through protective clean up—responsibility with Corps of Engineers, DEC, EPA.
- Remove/remediate contamination sources at NE Cape and Gambell, including sources at main complex and White Alice site (NEC), landfill sites, and areas in proximity to water source, homes and school (Gambell)—responsibility with Corps of Engineers, DEC, EPA.
- Install strategically located monitoring wells at NE Cape and Gambell to ensure protection of vulnerable water sources and to determine whether clean up efforts are effective—responsibility with Corps of Engineers and regulatory oversight from DEC and EPA, and in collaboration with Gambell, Savoonga, RAB Technical Advisor and ACAT.
- Ensure adequate funding for NALEMP programs at Gambell and NE Cape—responsibility with Corps of Engineers.

Actions needed for the protection of health and environment

- Independent evaluation and site assessment—ATSDR.
- Evaluation of NE Cape as national priorities list (Superfund site)—EPA.
- Independent community-based environmental health research—Gambell, Savoonga in partnership with ACAT and universities.
- Training for health care professionals to ensure better prevention of exposures, early diagnoses and treatment of health problems that might be associated with exposure to harmful chemicals—ACAT and universities in collaboration with NSHC and ANTHC.
- Environmental health tracking—monitor sensitive health outcomes such as thyroid disease, reproductive disorders, birth outcomes—health care providers and researchers in collaboration with communities.
- Ensure state, national and international policies that prevent the production and release of chemicals to protect the health of people in the Arctic—DEC, EPA, village leadership, ACAT.



"We don't want any of you to fight with each other, but work together to clean it up for our sake."—Annie Alowa

Thank you. Igamsiqayugviikamsi

Attachment I

Travel checklist

St. Lawrence Island Dialogue Meeting
December 12-14, 2011

Travel Details

Monday, Dec 12th

Overnight in Nome. Traditional commercial hotel arrangements. Commercial meals @ restaurants in town. Credit cards accepted. Cab from airport into town costs $6/per person one way. ATM cash machine is accessible (Wells Fargo 24 hours, Alaska USA @ grocery store, or several bars have them).

Check out the weather conditions via webcam in Nome:
http://www.visitnomealaska.com/nome-web-cam.html

Tuesday, Dec 13th

Breakfast in Nome. Polar Cafe, Coffee Shop @ ERA/Frontier Flying

Meeting and Lunch in Savoonga with group and community.

Fly to Gambell, Overnight in Gambell at the Sivuqaq Lodge. No credit cards accepted. Cash or personal check only; $115 per night single occupancy. No ATM or cash machines available.

Bring your own food to make dinner in Gambell. Kitchen facilities are available at the Sivuqaq Lodge to microwave items or boil water. Limited utensils, bowls, plates, cups. Shared bathroom and shower facilities.

Suggestions: Canned soups, dried soups, ramen noodles, camping meals (Mountain House), cheese, crackers, peanut butter, dried fruit, snack mix, carrots, chocolate, popcorn, beef jerky

Wednesday, Dec 14th

Bring your own food to make breakfast in Gambell.

Suggestions: Instant oatmeal, bread, dried fruit, pop tarts, granola bars, etc.

Meeting and Lunch in Gambell with group and community.

Depart Gambell around 4:30 pm, fly to Nome, arrive around 5:20 pm. Check in for Alaska Airlines flight. Cab into town is $6/person each way.

Dinner on your own in Nome restaurants, as time allows. Alaska Airlines flight departs at 9:10 pm.

CHECKLIST

- □ **Cash (souvenirs such as local carved ivory, cabs, meals, etc)**
- □ **Personal checks/cash to pay for lodging on Island ($115/night in Gambell)**
- □ **Food to make your own meals**
  - **Dinner Tuesday**
  - **Breakfast Wednesday**
  - **Snacks**
  - **Coffee/Tea/Hot Cocoa**
  - **Plus extra in case of weather delays**
- □ **Hand towel (towels provided/available in Gambell at Sivuqaq Lodge only)**
- □ **Utensils**
- □ **Coffee mug**
- □ **Refillable water bottle**
- □ **Warm coat**
- □ **Gloves, hat, scarf**
- □ **Sturdy, warm boots to walk in snow**
- □ **Sweater with layers (indoors can be much warmer)**
- □ **Long underwear and/or snow pants come in handy**

OPTIONAL ITEMS

- □ **Sleeping bag or sleep sack and pillow case (not required, but personal choice/comfort)**
- □ **Indoor shoes**
- □ **Small headlamp for reading**
- □ **Alarm clock**
- □ **Ear plugs (airplane or lodging)**
- □ **Camera**
- □ **Cell phone (may or may not work on the Island, depending on your service provider)**
- □ **Calling card (limited phones available in both locations, must use 1-800# or equivalent to call long distance).**
- □ **Something for small plane motion sickness (i.e. ginger or over the counter remedies)**